

CABINET-REAR VIEW

DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

Remove eight screws holding cabinet back and remove back. Disconnect HV anode, CRT socket, deflection yoke connectors from main chassis assembly. Disconnect degaussing coil from power supply assembly and speaker connectors from audio chassis and disconnect ground leads. Release wire retainers on degaussing shield, remove screw holding Horiz Stat Control to degaussing shield. Release latches holding main chassis assembly to cabinet bottom and remove chassis and Horiz Stat Control from cabinet. Release AC cord retainer from cabinet bottom. Release latches holding power supply assembly to cabinet bottom and remove assembly from cabinet. Release wire retainers as necessary. CRT may be removed at this point of disassembly. Loosen nine screws holding control

assembly to cabinet front and remove assembly from cabinet. Loosen two screws holding tuner and input/output assembly to cabinet top and remove assembly from cabinet. Release latches holding audio and remote/analog control/CRT display processor, swing assembly towards CRT until flat part of hinge clears flange on hinge mount. Lift hinge off pins and remove assembly from cabinet.

CRT REMOVAL

Follow "Chassis Removal" procedure and remove CRT neck assemblies. Remove ten screws holding front mask assembly to cabinet front and remove assembly from cabinet. Remove four nuts holding CRT to cabinet front and remove CRT from cabinet. Do Not lift CRT by the neck.

SERVICING IN THE FIELD

CRT IMPLOSION PROTECTION AND CLEANING

Implosion protection is an integral part of the picture tube, cleaning accomplished without CRT removal.

FUSE DEVICES

A 5-amp fuse is used for AC line protection. (See Placement Chart.)

VHF/UHF TUNER

Two buttons are provided for channel scanning with an Erase Button and an Add Button provided for channel pretuning. Ten buttons are provided on remote transmitter for direct two digit entry channel selection. See channel pretuning procedure.

HORIZONTAL OSCILLATOR

Adjustment of the horizontal hold is accomplished by the proper setting of the Horiz Freq Coll. (See Placement Chart.)

WIDTH

The width may be varied by adjusting the horiz size coll. (See Placement Chart.)

FOCUS

The focus may be varied by a focus control. (See photo, Cabinet-Rear View.)

AGC

The AGC may be varied by RF AGC U and RF AGC V controls. (See Placement Chart.)

CENTERING

Horizontal centering is accomplished by proper placement of the horizontal centering jumpers. (See Placement Chart.)

Vertical centering is accomplished by proper placement of the vertical centering jumpers. (See Placement Chart.)

FOLDER 1
SET 2107

SONY MODEL
KV-2648R (CH.SCC-338E-A)



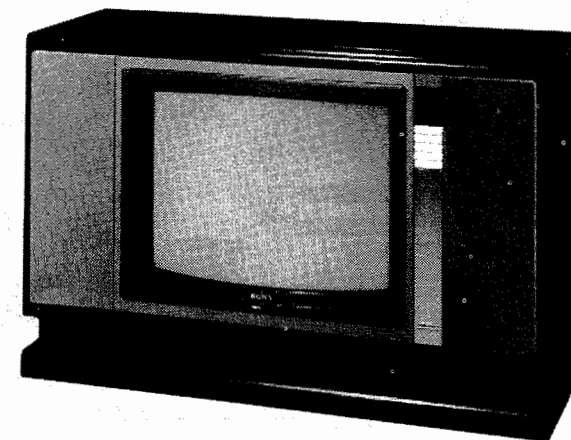
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COLOR TV



Model KV-2648R

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The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed. 82PD01445

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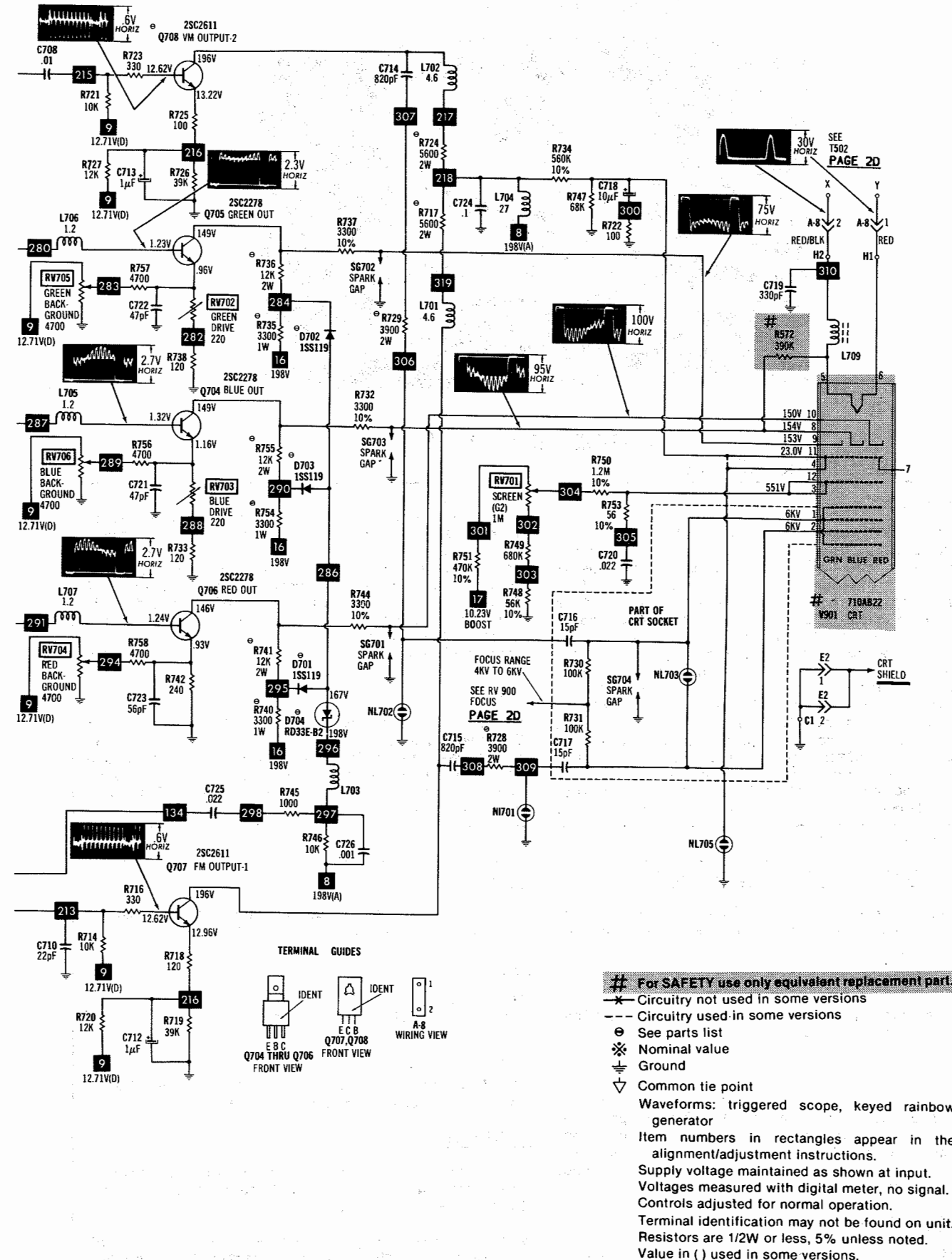
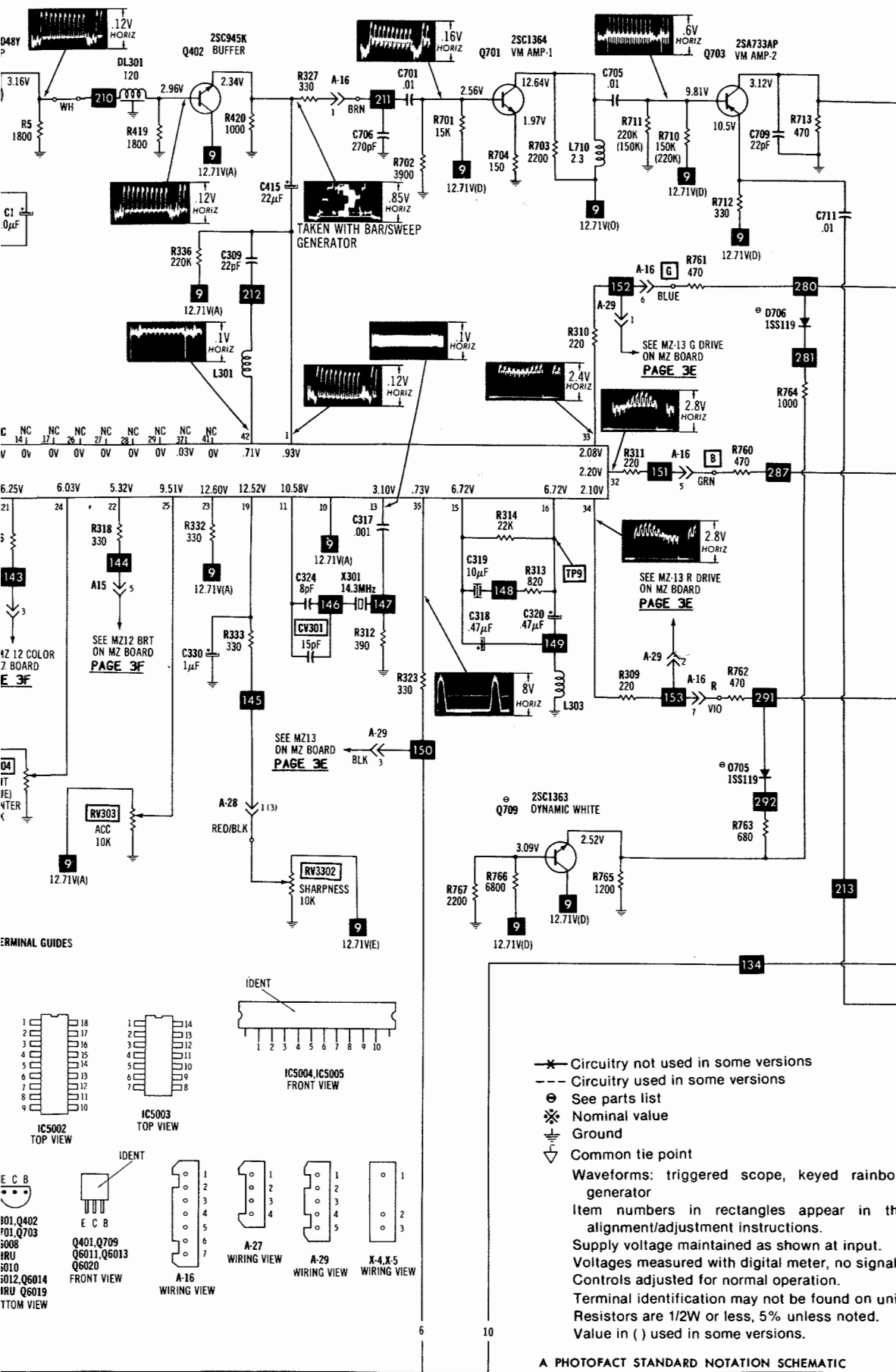


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DATE 10 -82 SET 2107 FOLDER 1

SONY MODEL
KV-2648R (CH.SCC-338E-A)

SET 2107 FOLDER 1



TV ALIGNMENT INSTRUCTIONS

Use an isolation transformer, or observe polarity, and maintain line voltage at 120VAC. Allow a 20-minute warm-up period for receiver and test equipment.	
Suggested Alignment Tools:	GC ELECTRONICS
T202,T203.....	9296,9297,9300
T201,T204,T205,T206,T302,T6001,T6002.....	9440
T606.....	9293,9294

PRELIMINARY INSTRUCTIONS

Set the channel selector to the highest unused channel. Set scope sweep to external. Connect scope vertical input to scope vertical input on sweep/marker generator. Connect scope external horizontal input to scope horizontal input on sweep/marker generator. Ground test equipment to TV chassis unless specified otherwise. Use only enough generator output to provide a usable indication. Note: Response may vary slightly from that shown.	
Connect a +5.2V bias to TP2 (Pin 39-IC201). Disconnect IF Input Plug J201.	

VIDEO IF ALIGNMENT (SWEEP MARKER GENERATOR)

DIRECT PROBE FROM SWEEP/MARKER GENERATOR	SWEEP GENERATOR OUTPUT	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	REMARKS
To TP12	To J201 (IF Input)		45.75MHz (Modulated)	Adjust T202 for Maximum gain. See Figure 1. NOTE: Use 45.75MHz modulated marker.
"	"	44MHz (10MHz Sweep)	41.25MHz 42.17MHz 44.00MHz 45.75MHz 47.25MHz	Adjust T201 and T206 for Maximum gain and symmetry of response. T201 and T206 affect overall response. See Figure 2.

VIDEO IF ALIGNMENT (BAR SWEEP GENERATOR)

BAR SWEEP GENERATOR	SCOPE INPUT	REMARKS
To J201 (IF Input)	To TP12	Perform Video IF Adjustments per SWEEP/MARKER GENERATOR instructions above. See Figure 3.

SOUND IF ALIGNMENT

Tune in a station and adjust T204 and T205 for maximum sound. Reduce signal strength at the antenna terminals until distortion appears. Continue to reduce the signal while aligning for undistorted output by adjusting T205.
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AUTOMATIC FINE TUNING ALIGNMENT

Connect as explained in preliminary instructions unless specified otherwise.				
DIRECT PROBE FROM SWEEP/MARKER GENERATOR	SWEEP GENERATOR OUTPUT	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	REMARKS
To pin 5-Plug A17	To J201 (IF-Input)	44.00MHz (10MHz Sweep)	45.75MHz	Adjust T203 to place 45.75MHz marker at peak of response. See Figure 4.

TV ALIGNMENT INSTRUCTIONS (Continued)

CHROMA BANDPASS ALIGNMENT (SWEEP MARKER GENERATOR)

Connect as explained in preliminary instructions. Set color control to maximum, tint control to midrange.				
DETECTOR PROBE FROM SWEEP/MARKER GENERATOR	SWEEP GENERATOR OUTPUT	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	REMARKS
To TP3 (pin 6-IC301)	To J201 (IF-Input)	44.00MHz (10MHz Sweep)	3.08MHz 3.58MHz 4.08MHz	Adjust T302 for Maximum gain and symmetry of response. See Figure 5.

CHROMA BANDPASS ALIGNMENT (BAR SWEEP GENERATOR)

BAR SWEEP GENERATOR	SCOPE INPUT	REMARKS
To J201 (IF-Input)	To TP3 (pin 6-IC301).	Perform CHROMA BANDPASS Adjustments per SWEEP/MARKER GENERATOR instructions above. See Figure 6.

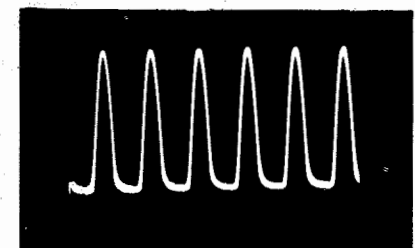


Figure 1

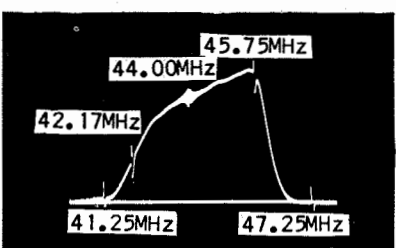


Figure 2

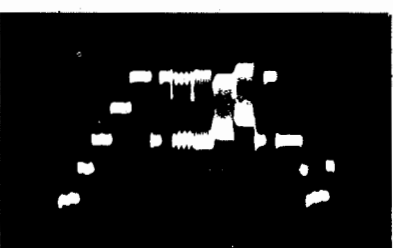


Figure 3

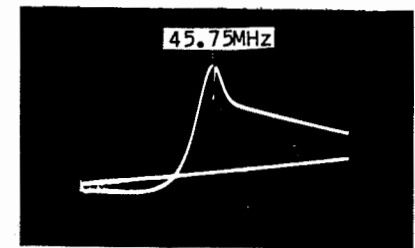


Figure 4

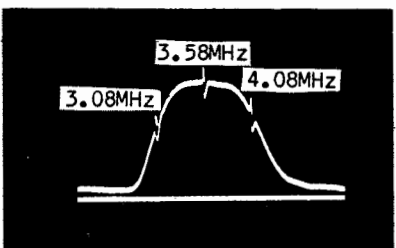


Figure 5



Figure 6

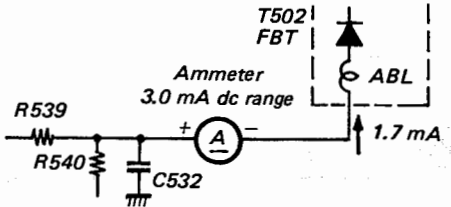
SERVICE INFORMATION

R572 ADJUSTMENT

When replacing the following components, make this adjustment.

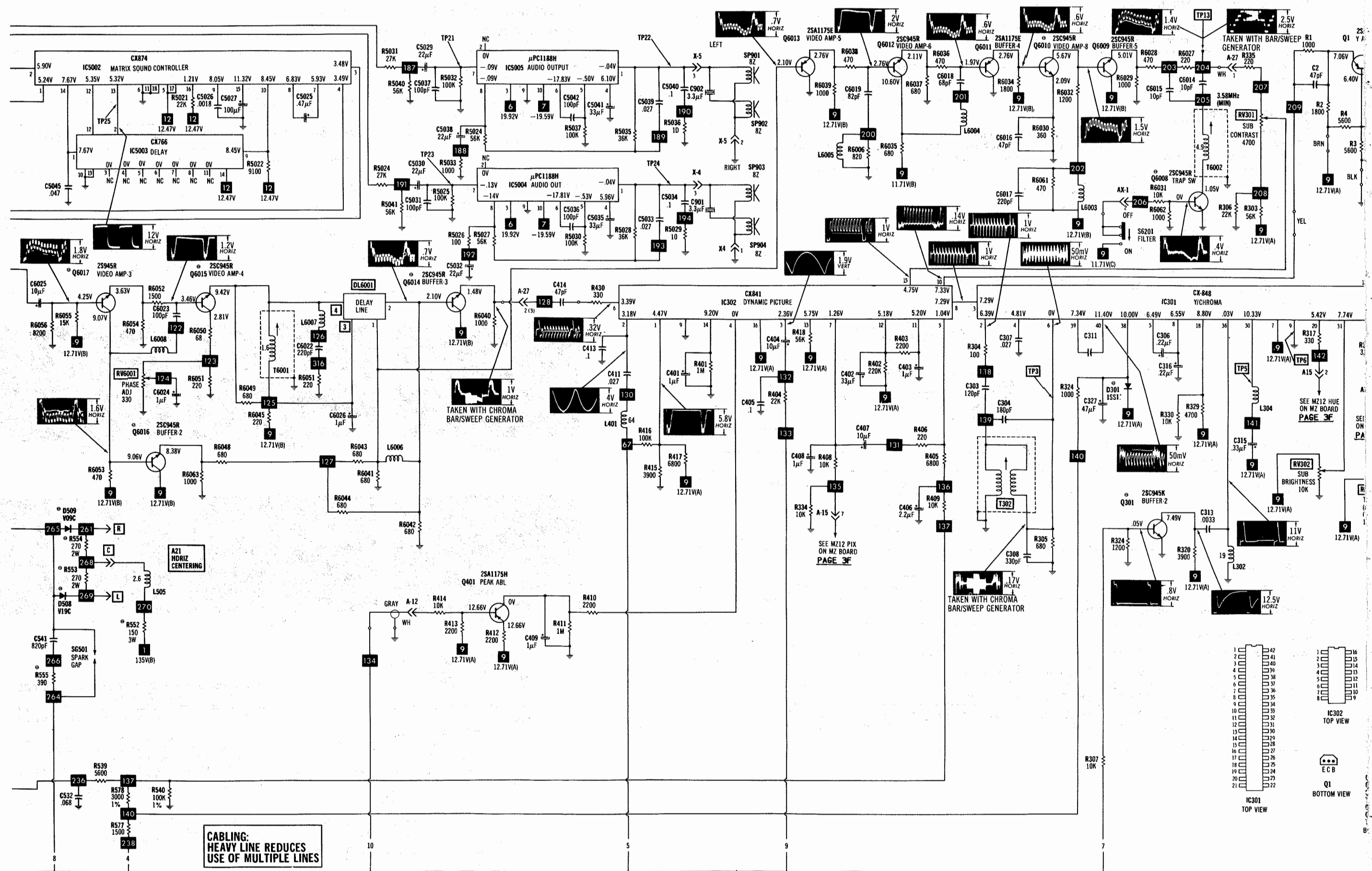
R572, D501, D510, IC501, Q505, Q506, R506, R507, R533, R536, R537, R538, R540, R562, R568, R577, R578, R590

1. Measure the ABL terminal current by the ammeter as shown.



2. Set PICTURE and BRIGHT control so that ABL terminal current is 1.7 mA dc.
3. Connect a regulated-dc power supply to the HV HOLD DOWN check point (TP85) and supply 15.2 ± 0.1 V dc.
4. When the dc voltage is supplied, confirm that the picture disappears and no sound is heard. (HV hold down circuit operates.)
Note: As soon as HV hold down circuit operates, turn the POWER switch to OFF.
5. If above steps are not satisfied, select a resistance value of R572 and repeat above steps 3 and 4.
6. Disconnect the regulated-dc power supply and the ammeter.
7. Solder the ABL terminal of FBT.

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SAFETY PRECAUTIONS

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any). Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

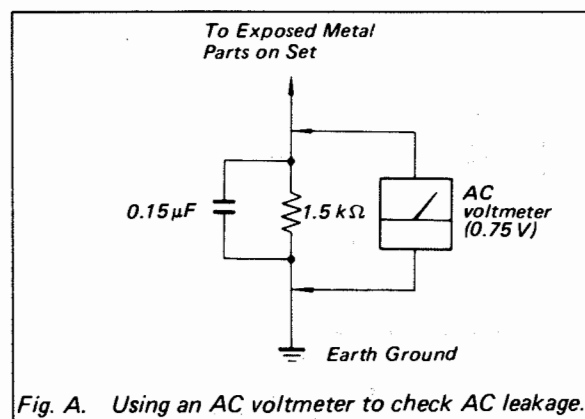


Fig. A. Using an AC voltmeter to check AC leakage.

Courtesy of the Manufacturer

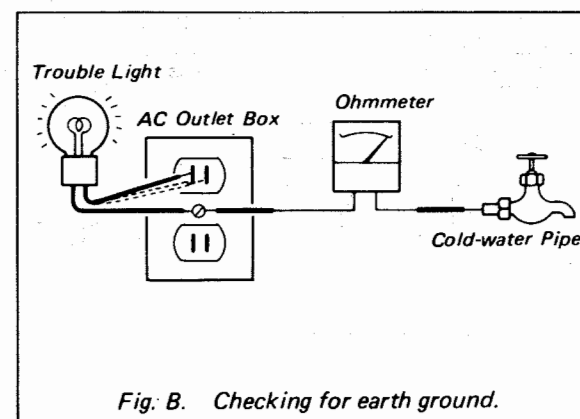


Fig. B. Checking for earth ground.

TROUBLESHOOTING AID

Note: Waveforms taken with triggered scope, Keyed-Rainbow generator. Schematic voltages measured with digital meter, no signal. Controls adjusted for normal operation.

PICTURE or SOUND

NO PIC, NO SOUND, NO RASTER: Check AC power supply and sources generated from Horizontal Output Transformer (T502). Refer to "Troubleshooting" Power Supply and Horizontal circuits.

NO PIC, NO SOUND, HAS RASTER: Check IF-AGC and source voltages from Horizontal Output Transformer (T502). Refer to "Troubleshooting" IF-AGC and Horizontal circuits.

NO PIC, HAS SOUND, NO RASTER: Check Horizontal Output Transformer (T502) sources and Video circuit. Refer to "Troubleshooting" Horizontal and Video circuits.

NO PIC, HAS SOUND, HAS RASTER: Refer to "Troubleshooting" Video circuit.

HAS PIC, NO SOUND: Refer to "Troubleshooting" Audio circuit.

OVERLOADED PICTURE: Refer to "Troubleshooting" IF-AGC circuit.

LOW OR EXCESSIVE BRIGHTNESS: Check Video and Luminance circuits. Refer to "Troubleshooting" Video circuit.

SWEEP

NO RASTER, HAS SOUND: Check HV rectifier, Part of Horizontal Output Transformer (T502). Refer to "Troubleshooting" Horizontal circuit.

NO RASTER, NO SOUND: Refer to "Troubleshooting" Horizontal circuit.

NO VERT DEFLECTION: Refer to "Troubleshooting" Vertical circuit.

POOR VERT LIN OR FOLDOVER: Refer to "Troubleshooting" Vertical circuit.

POOR HORIZ LIN OR FOLDOVER: Refer to "Troubleshooting" Horizontal circuit.

NARROW PICTURE: Refer to "Troubleshooting" Horizontal circuit.

VERT OFF FREQUENCY: Refer to "Troubleshooting" Vertical circuit.

HORIZ OFF FREQUENCY: Refer to "Troubleshooting" Horizontal circuit.

SYNC

NO VERT/HORIZ SYNC: Refer to "Troubleshooting" Sync circuit.

RASTER

YELLOW (NO BLUE): Check Chroma and Blue Output circuits. Refer to "Troubleshooting" Raster circuit.

CYAN (NO RED): Check Chroma and Red Output circuits. Refer to "Troubleshooting" Raster circuit.

MAGENTA (NO GREEN): Check Chroma and Green Output circuits. Refer to "Troubleshooting" Raster circuit.

COLOR (B/W operating normally)

NO COLOR: Refer to "Troubleshooting" Color circuit.

WEAK COLOR: Refer to "Troubleshooting" Color circuit.

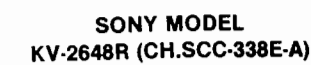
NO COLOR SYNC: Refer to "Troubleshooting" Color circuit.

NO GREEN: Check Chroma and Green Output circuits. Refer to "Troubleshooting" Raster circuit.

NO BLUE: Check Chroma and Blue Output circuits. Refer to "Troubleshooting" Raster circuit.

NO RED: Check Chroma and Red Output circuits. Refer to "Troubleshooting" Raster circuit.

INCORRECT HUE (TINT): Refer to "Troubleshooting" Color circuit.



TROUBLESHOOTING

POWER SUPPLY

Check AC Fuse (F601), if bad check Diodes D601 and D602, Converter Output Transistor (Q602). Replace any bad parts and the AC Fuse, check for short to ground. Apply 120V AC power and check for a horizontal waveform at the collector of Q602, if the waveform is absent, check the Converter Drive Transistor (Q601), check waveform at TP93D, note that the common tie point is not the chassis ground. Connect the ground lead of a VTVM to the common tie point and check for 10.06V at the base of the Current Limiter Transistor (Q605) and 9.52V at the emitter. Check for 21.1V at the collector of the Current Limiter Transistor (Q604). Check for 20.5V at the collector of Q601. Check for 325V at the collector of Q602 and for .14V at the emitter and .03V at the base. Check for 21.1V between the emitter and the collector of Current Limiter Transistor (Q604), check Diodes D604, D605 and D606. If the Pulse Amp Transistor (Q603) fails it may cause Q602 to fail. Check for 135V at TP97G and 14.12V at TP96F, 20.0V at TP99, -19.80V at TP98 and -26.3V at TP95E.

HORIZONTAL

Check for 135V at the collector of the Horizontal Output Transistor (Q502). Check for 12.7V at pin 17 of Sync/Vert Osc/ Horiz Osc IC (IC501) and 63.5V at the collector of Horizontal Drive Transistor (Q501). Inject a horizontal signal at the base of Transistor Q502. If the high voltage returns, check the voltages and waveforms at pins 1, 2, 3, 5, 6, and 18 on IC501 and check Transistor Q501, Zener Diode D514 and associated circuitry. If the high voltage is not present, check Transistor Q502, Diode D503 and associated circuitry. If these check out as normal, check the Horizontal Output Transformer (T502), the high voltage rectifier is part of the horizontal output transformer assembly, it may be defective. B+ sources developed from the horizontal output transformer can cause loading of the horizontal circuit. Check B+ sources rectified by Diodes D503, D504, D505 and D506. Check for 24.5V at TP96, 14.74V at TP92, 198V at TP95 and 12.71V at TP93. Poor horizontal linearity can be caused by the condition of Capacitors C566, C530, C540, C541 and Diodes D508, D509. Also check the pincushion circuit.

IF-AGC

Inject an IF signal at the IF Input (J201) and check for picture information on the CRT. If picture is present, check the tuner and tuner AGC circuit. If a picture is not present, check for 12.63V at pin 13 of VIF/SIF IC (IC201). Check for a video waveform at TP12. If the video waveform is present, refer to "Troubleshooting" Video circuit. If the video waveform is not present, apply AGC bias at pin 38 of IC201. If the video waveform returns, check pins 4, 5, 38, 39 of IC201. If the video waveform is still absent at pin 41 of IC201, check voltages and associate components of pins 2, 3, 8, 9, 10, 11, 32, 33, 36 and 40 of IC201. A defective AGC circuit can cause an overloaded picture, excessive snow or loss of picture and sound. See voltage chart on IC201 for AGC voltages with signal.

Voltages taken with Keyed-Rainbow generator unless otherwise noted.

Pin 4	5.23V	IC201
Pin 5	3.76V	
Pin 38	5.38V	
Pin 39	5.38V	

AUDIO

Check for B+ at pins 21, 31 of VIF/SIF IC (IC201) with volume control at MINIMUM, the voltage at pin 16 of IC201 should be 0V and 11.0V with volume control at Maximum. Check for 12.47V at TP28, 19.92V at TP29 and -19.59V at TP30. Inject an audio signal at pin 1 Plug A19, check for sound with the volume up. If no audio, check voltage at pin 14 of User Controller IC (IC5001). It changes up to 6.00V with volume up and down to .50V with the volume all the way down. If the voltage does not change with volume up and down, check Mute Transistor (Q5001), IC5001 and associated circuitry and remote circuit. If there is no audio on the left side, inject an audio signal at TP21 and listen for audio from the left speaker. If no audio, check for a waveform at TP22, if waveform is not present, check Audio Output IC (IC5005) pins 3, 10, 4, 7 and associated components. If there is a waveform at TP22 and still no audio, check Speakers SP901 and SP902. If there is no audio on the right side inject the audio signal at TP23, check the waveform at TP24, check IC5004 pins 3, 10, 4, 7 and associated components. If no waveform at TP24, check Speakers SP903 and SP904. If no matrix sound, check Sound Controller IC (IC5002) pins 17, 7 thru 14 and check waveform at TP25 and check Delay IC (IC5003) pins 14, 9, 2, 12 and 1.

VIDEO

Check for 12.71V at TP91. Inject a video signal at TP12 and check for a video waveform at the base of Equalizer Transistor (Q6001). If the waveform is not there, check the Buffer Transistor (Q6019), Video Amp Transistor (Q6020), if the waveform is present, check the waveform at TP17. If the waveform is absent check Equalizer Transistors 1 thru 4 (Q6001 thru Q6004) and associated components. If the waveform is present, check the waveform at the base of Buffer-1 Transistor (Q6007), if the waveform is absent check the Video Switch IC (IC6001), DC Clamp Transistor (Q6018), Video Amp Transistors 1 and 2 (Q6005-Q6006). If the waveform is present, check waveform at TP18, if the waveform is not present, check Transistor Q6007, if the waveform is present, check waveform at base of Video Amp-5 Transistor (Q6013). If the waveform is not present, check Video Amp-3 Transistor (Q6017), Buffer-2 Transistor (Q6016), Video Amp-4 Transistor (Q6015) and associated circuitry. If the waveform is there, check for a waveform at TP13, if the waveform is absent, check Transistor Q6013, Video Amp-6 Transistor (Q6012), Buffer-4 Transistor (Q6011), Video Amp-8 Transistor (Q6010), Buffer-5 Transistor (Q6009) and associated circuitry. If the waveform is present at TP13, check for 12.71V at pin 16 of IC302. Check voltages and waveforms on Dynamic Picture IC (IC302). Check for a video waveform at pin 10 of IC302, if the waveform is there, check the waveform at pin 1 of Y, Chroma IC (IC301). Check voltages and

TROUBLESHOOTING (Continued)

waveforms on pins 32, 33, 34 of IC301, check for 12.71V at pins 7 and 10 of IC301 and check for 8.80V at pin 18. If waveforms are absent at pins 32, 33, 34 of IC301 check the IC and associated circuitry. Check the waveform at the base of the VM Amp-1 Transistor (Q701), VM Amp-2 Transistor (Q703), VM Out-1 Transistor (Q707), VM Out-2 Transistor (Q708) and Dynamic White Transistor (Q709). Check the waveform at the base of the Blue Output Transistor (Q704), Green Out Transistor (Q705), Red Out Transistor (Q706). Check waveforms at pins 8, 9 and 10 of the CRT, check the CRT and associated circuitry.

Inject a video signal at the video In Plug (J905) and check for video on the screen, with the video TV-External Switch at External position. If there is no video on the screen, check for a video waveform at pin 3 of Video Switch IC (IC6001). If the waveform is not there, check Video Buffer Transistor (Q6201) and associated circuitry. If the waveform is there, check for a waveform at the base of Video Amp-1 Transistor (Q6005) and pins 3, 4, and 6 of IC6001. If Filter Switch (S6201) has no action, check Trap Switch Transistor (Q608) and associated circuitry.

VERTICAL

Check for 11.70V at pin 14 of Sync/Vert Osc/ Horiz Osc IC (IC501) and check for 24.5V at pin 11 and 25.0V at pin 4 of Vert Out IC (IC502). Inject a vertical signal at pin 12 of IC501 and check for a vertical waveform at pin 8 of IC501. If waveform is absent, check voltages and waveforms on IC501 pins 9 thru 14. Check Diodes D513, D515 and associated circuitry. If the waveform is present at pin 8 of IC501 and still no vertical deflection on the CRT, check IC502 pins 3, 4, 7 voltages and waveforms, Diodes D502, D517, Electrolytic C525 and associated circuitry. Poor vertical linearity or foldover can be caused by vertical feedback and bias circuit, check Capacitors C523, C524, C514, C515, C569 and C563. Check Resistance Measurements Chart for possible changes in feedback bias circuitry.

SYNC

Check for a video waveform with horizontal and vertical sync signal at the base of Sync Sep Transistor (Q507) and check for the waveform at pin 16 of Sync/Vert Osc/ Horiz Osc IC (IC501). Check for the proper vertical waveform at pin 12 of IC501 and check for the proper horizontal waveform at pin 1 of IC501. If there is no horizontal or vertical sync on the CRT, check Q507, IC501 and associated circuitry. If there is no vertical sync, check Q507, Diode D515 and associated circuitry. If there is no horizontal sync, check IC501 and associated circuitry.

RASTER

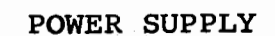
Check CRT and check CRT voltages and waveforms. If there is missing color or can not set up B&W, check the voltages at Dynamic White Transistor (Q709) and check the Diodes D705, D706. If no blue (yellow raster) check the Blue Output Transistor (Q704), check pin 8 of the CRT (V901), check the CRT and check voltage and waveform at pin 32 of Y, Chroma IC (IC301) and associated circuitry. If no red (cyan raster) check the Red Output Transistor (Q706), check pin 10 of the CRT, check the CRT and check voltage and waveform at pin 34 of Y, Chroma IC (IC301) and associated circuitry. If no green (magenta raster) check the Green Output Transistor (Q705), check pin 9 of the CRT, check the CRT and check voltage and waveform at pin 34 of Y, Chroma IC (IC301) and associated circuitry.

COLOR

Inject a video signal at TP12 (on the AX Board), check for a waveform at TP20 (on the AX Board). If the waveform is absent, check Buffer-3 Transistor (Q6014), check Delay Line (DL6001) and associated circuitry. If the waveform is present at TP20, check for a chroma waveform at pin 8 of Dynamic Picture IC (IC302). If the waveform is absent, check IC302 and associated circuitry. If the waveform is there, check for a chroma waveform at pin 6 of Y, Chroma IC (IC301). Check for an oscillation waveform at pin 13 of IC301 (14.3MHz, 4 times 3.58MHz). If the waveform is absent, check the 14.3MHz Osc Crystal (X301). If weak color, check waveforms at pins 3, 2, 6, 5, 8 of IC301, check for alignment of T302 and check Electrolytics C306, C316 and associated circuitry. If no color sync, check the waveform at pin 36 of IC301, if the waveform is absent check Buffer-2 Transistor (Q301) and IC301 and associated circuitry. Check for the right oscillator frequency at pin 13 of IC301, check the adjustment on Color Sync Control (CV301) and check associated components. If no green, check waveform at pin 33 of IC301, check waveform at the collector of the Green Output Transistor (Q705), check pin 9 on the CRT (V901), check the CRT and associated circuitry. If no blue, check waveform at pin 32 of IC301, check waveform at the collector of the Blue Output Transistor (Q704), check pin 8 of the CRT, check the CRT and associated circuitry. If no red, check waveform at pin 34 of IC301, check waveform at the collector of the Red Output Transistor (Q706), check pin 10 of the CRT, check the CRT and associated circuitry. If incorrect hue (tint), check IC301 pins 6, 11, 13, 15, 16 thru 36 and associated circuitry.

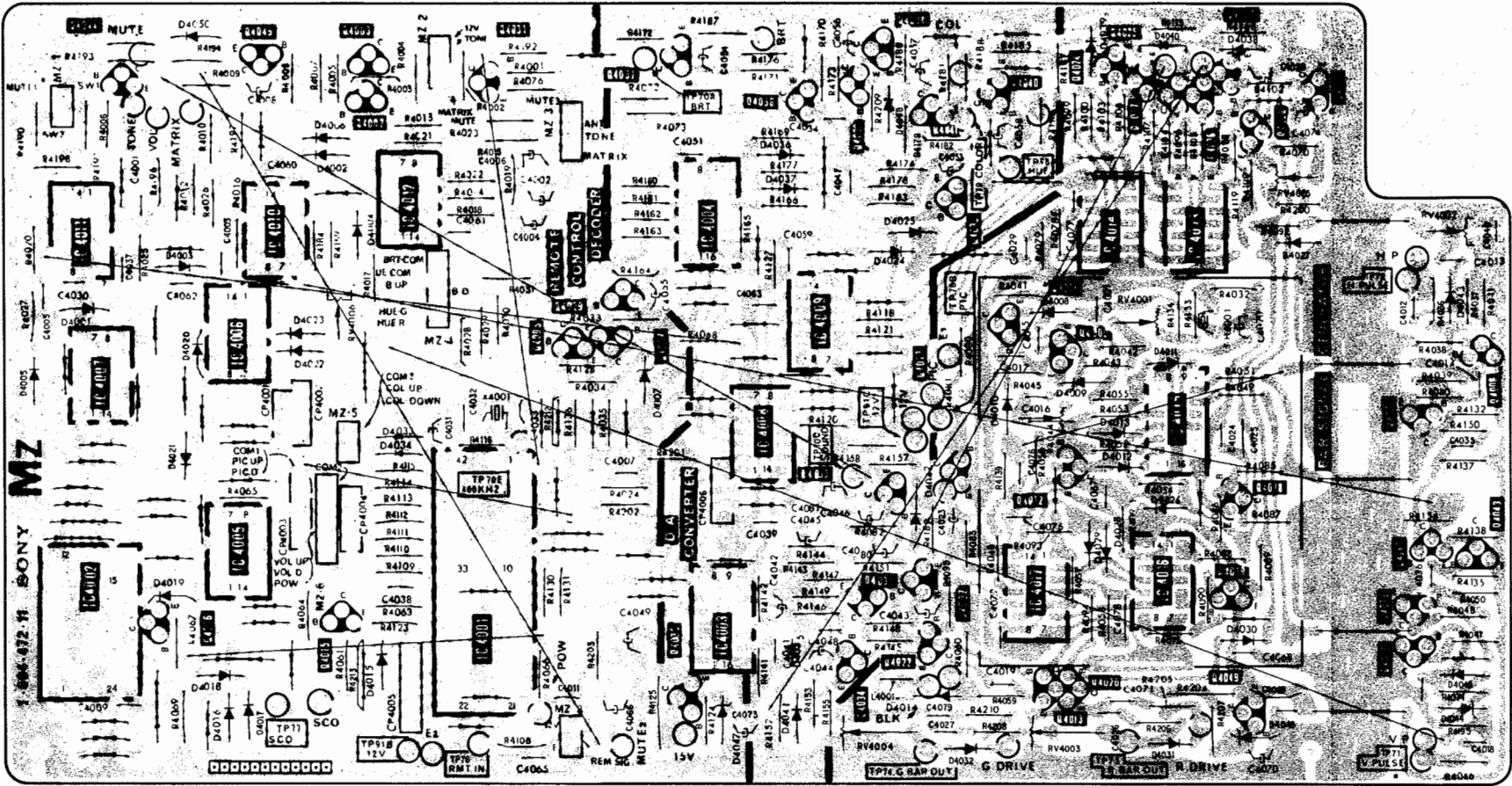


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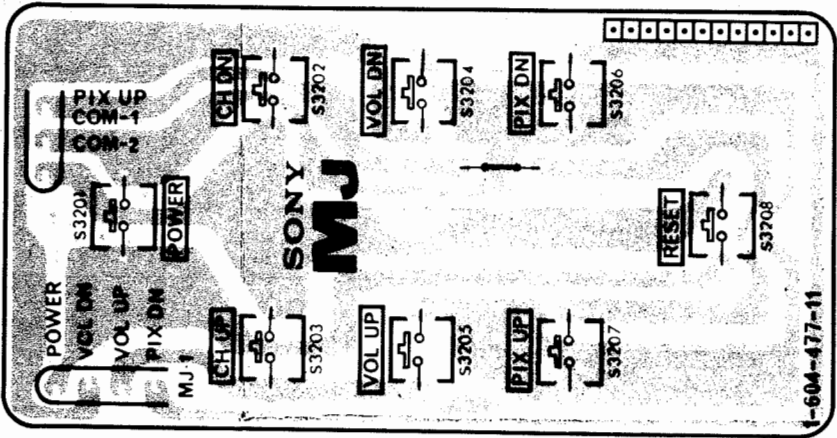
MZ

REMOTE CONTROL,
ANALOG CONTROL,
PICTURE TUBE
DISPLAY PROCESSOR



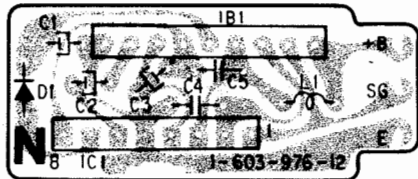
MJ

[CONTROL BUTTONS]



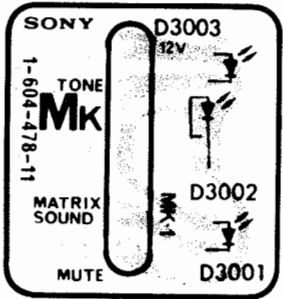
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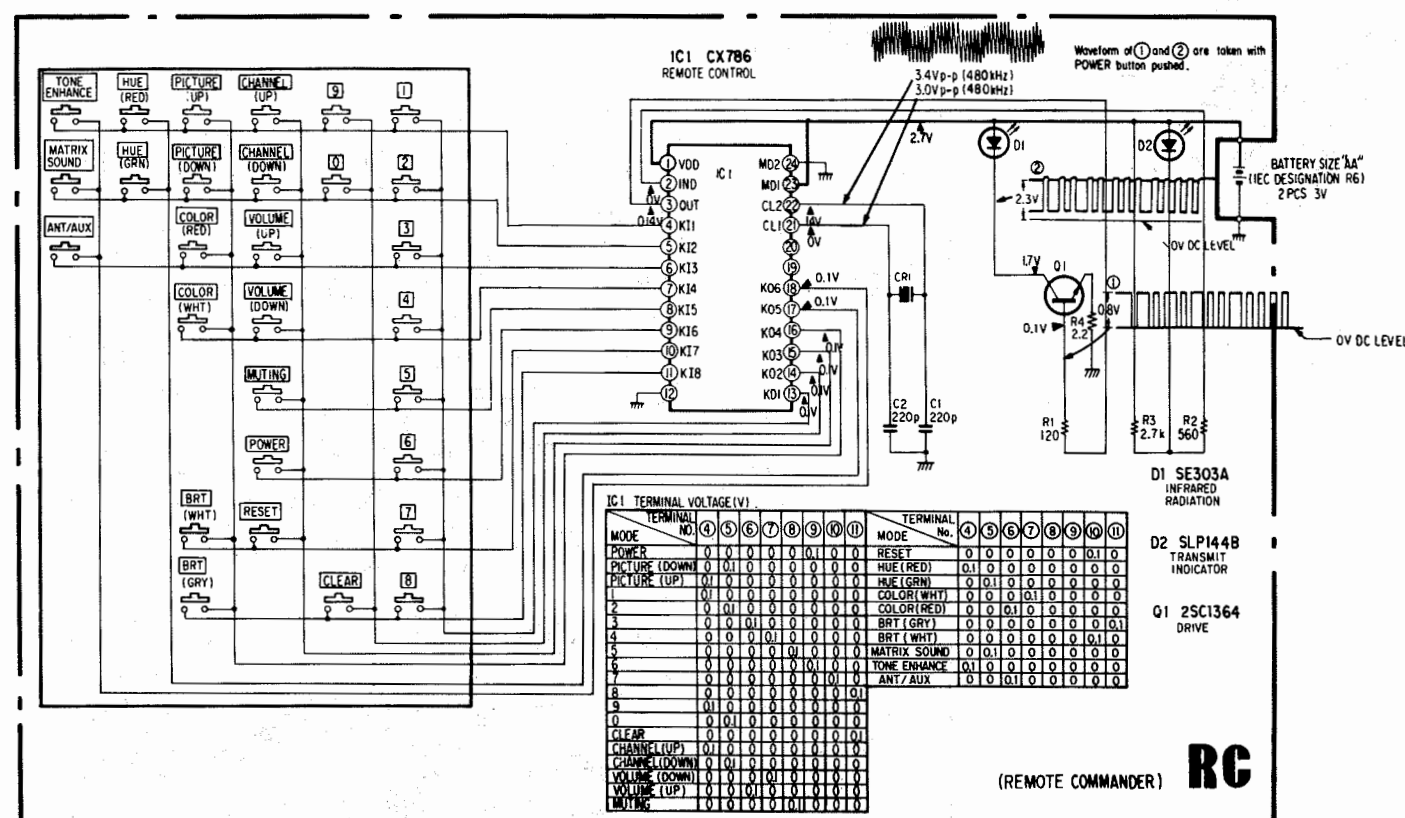
REMOTE CONTROL
HEAD AMP



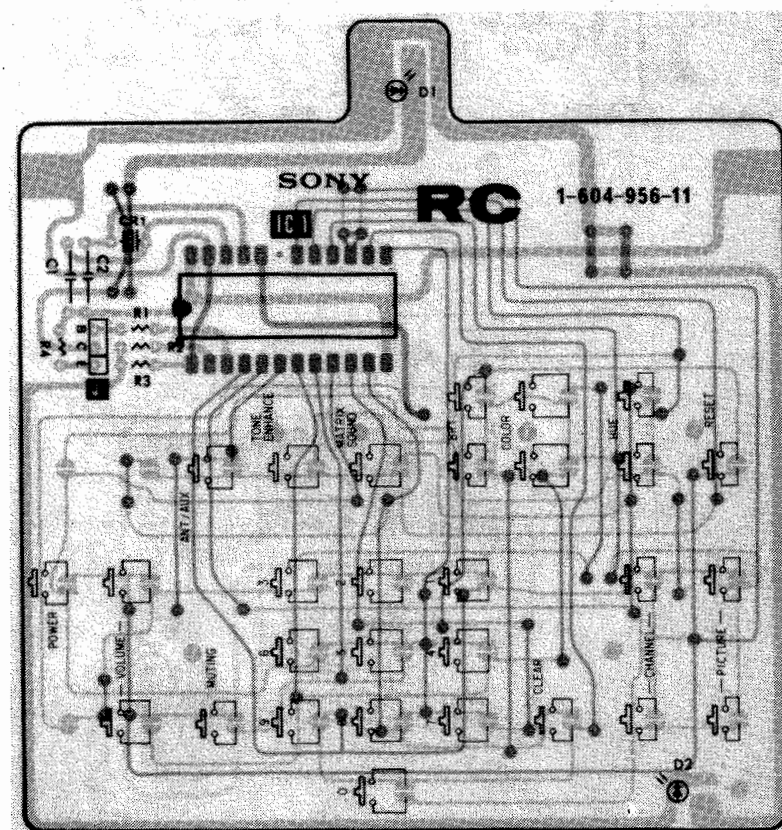
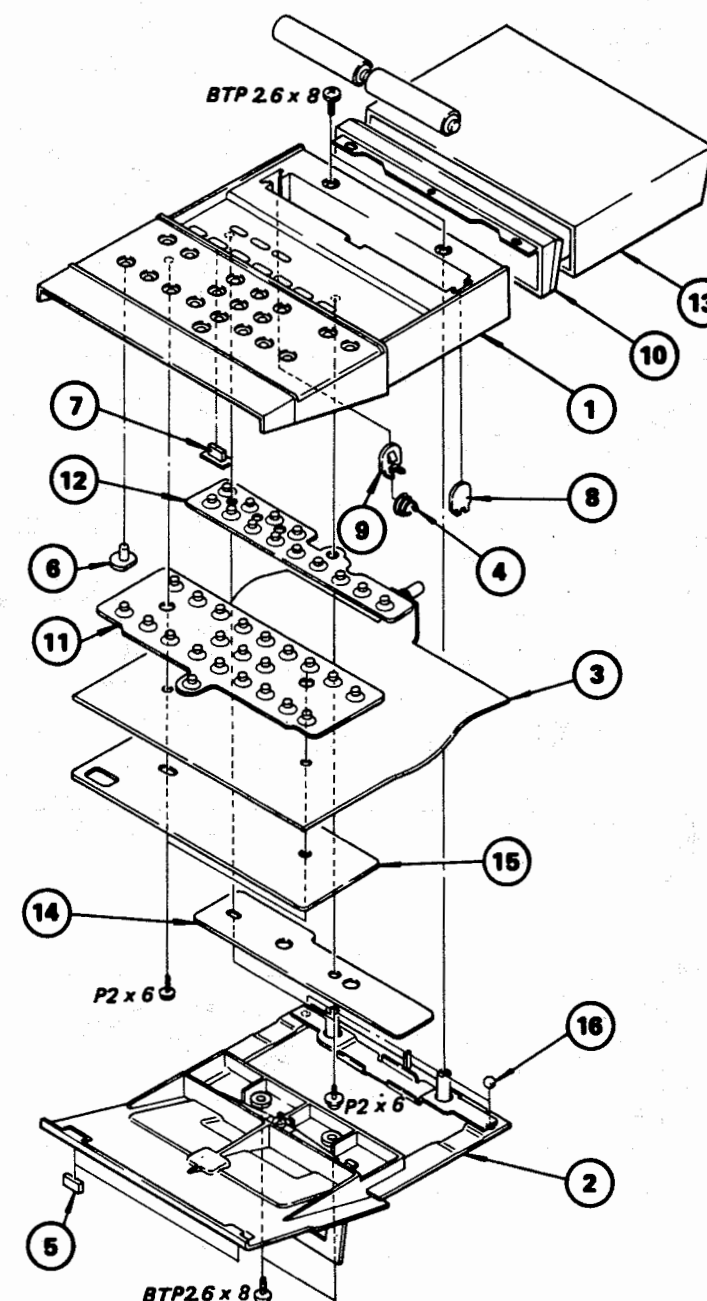
MK

[MODE INDICATOR]



REMOTE COMMANDER RM-704

EXPLODED VIEW



ELECTRICAL PARTS LIST

<u>Ref.No</u>	<u>Part No</u>	<u>Description</u>
▲:1-604-956-00		RC BOARD *****
4-352-048-00		TERMINAL (A), BATTERY
4-352-049-00		TERMINAL (B), BATTERY

CAPACITOR

C1	1-161-315-00	CERAMIC	220PF	10%	50V
C2	1-161-315-00	CERAMIC	220PF	10%	50V

CRYSTAL

CR1 1-527-476-00 OSCILLATOR, CERAMIC

DIODE

D1 8-719-193-03 DIODE SE303AX
D2 8-719-901-44 DIODE SLP144B

IC

IC 1 8-759-907-86 IC CX-786

TRANSISTOR

01 8-729-965-22 TRANSISTOR 2SC1652-P

RESISTOR

R1	1-246-772-00	CARBON	120	5%	1/8W
R2	1-246-780-00	CARBON	560	5%	1/8W
R3	1-246-788-00	CARBON	2.7K	5%	1/8W
R4	1-246-751-00	CARBON	2.2	5%	1/8W

<u>No.</u>	<u>Part No</u>	<u>Description</u>
1	X-4352-013-0	CASE ASSY, UPPER
2	X-4352-014-0	CASE ASSY, LOWER
3	•1-604-956-00	RC BOARD
4	2-272-908-00	SPRING (B)
5	4-352-044-00	FOOT, RUBBER
6	4-352-045-00	KEY TOP (A), TUNING
7	4-352-046-00	KEY TOP (B), TUNING
8	4-532-048-00	TERMINAL (A), BATTERY

<u>Remark</u>	<u>No.</u>	<u>Part No</u>	<u>Description</u>
	9	4-532-049-00	TERMINAL (B), BATTERY
	10	4-352-054-00	PLATE, FROSTED
	11	4-352-055-00	SHEET (A), RUBBER
	12	4-352-056-00	SHEET (B), RUBBER
	13	4-352-058-00	PANEL, SLIDE
	14	4-352-062-00	SPACER (B)
	15	4-352-063-00	SPACER (A)
	16	7-671-114-01	BALL 4, STEEL

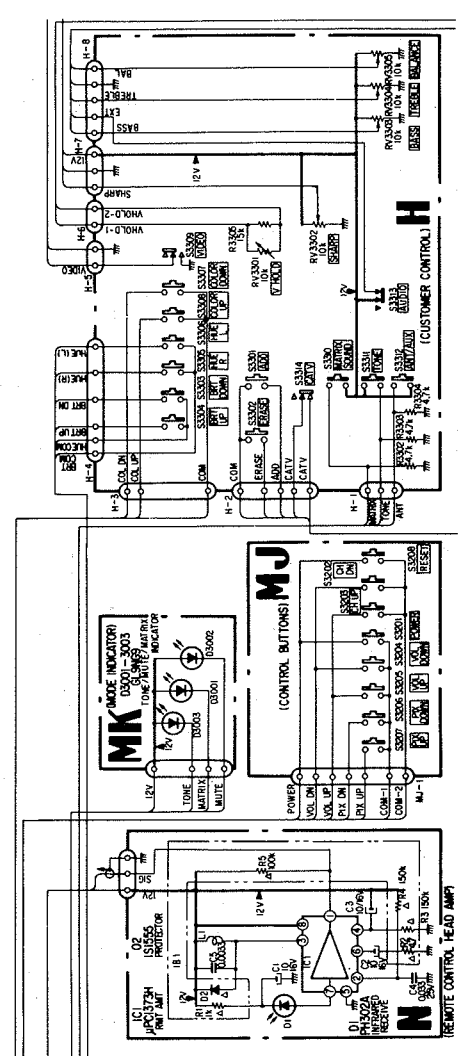
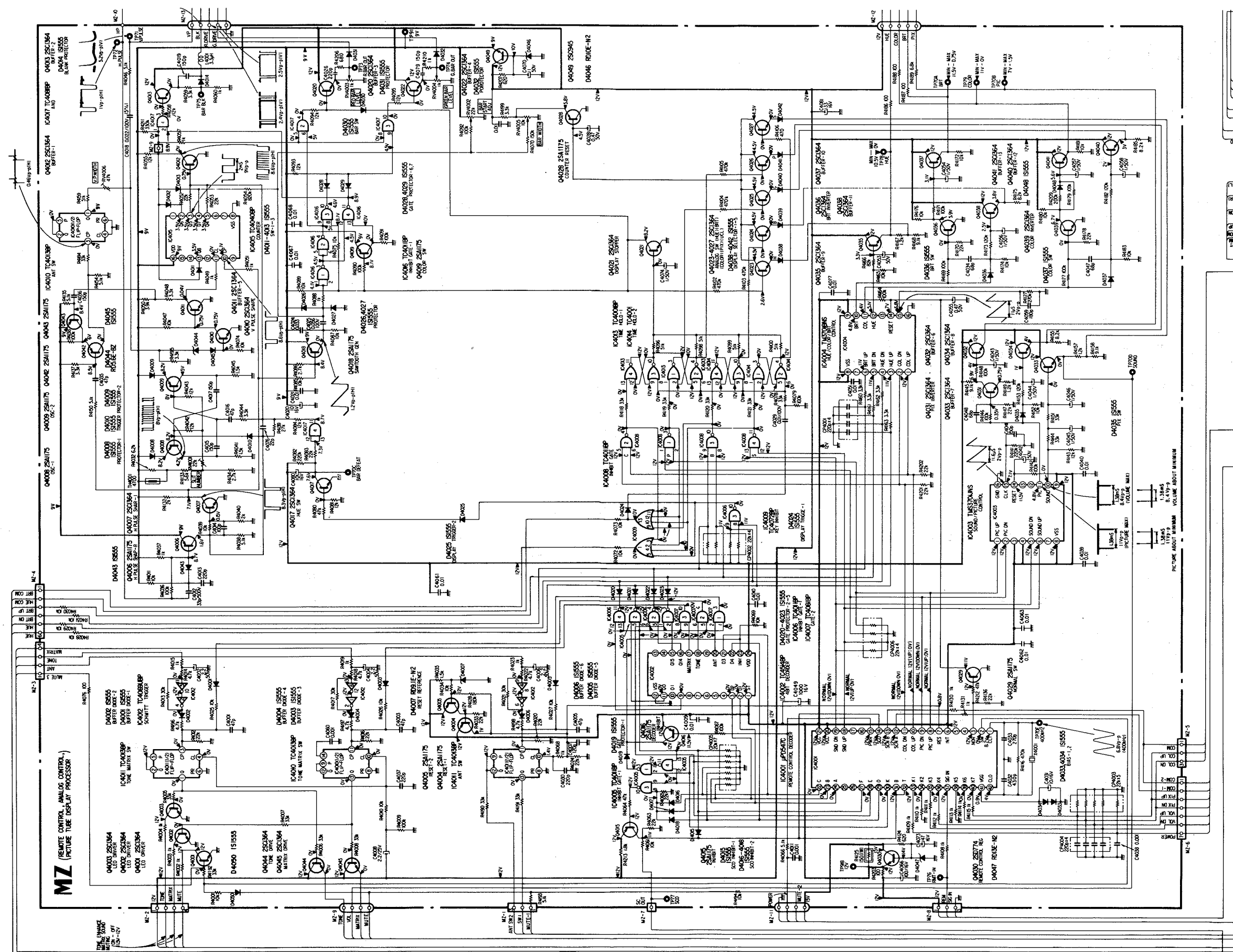


B



S

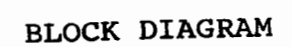
S A

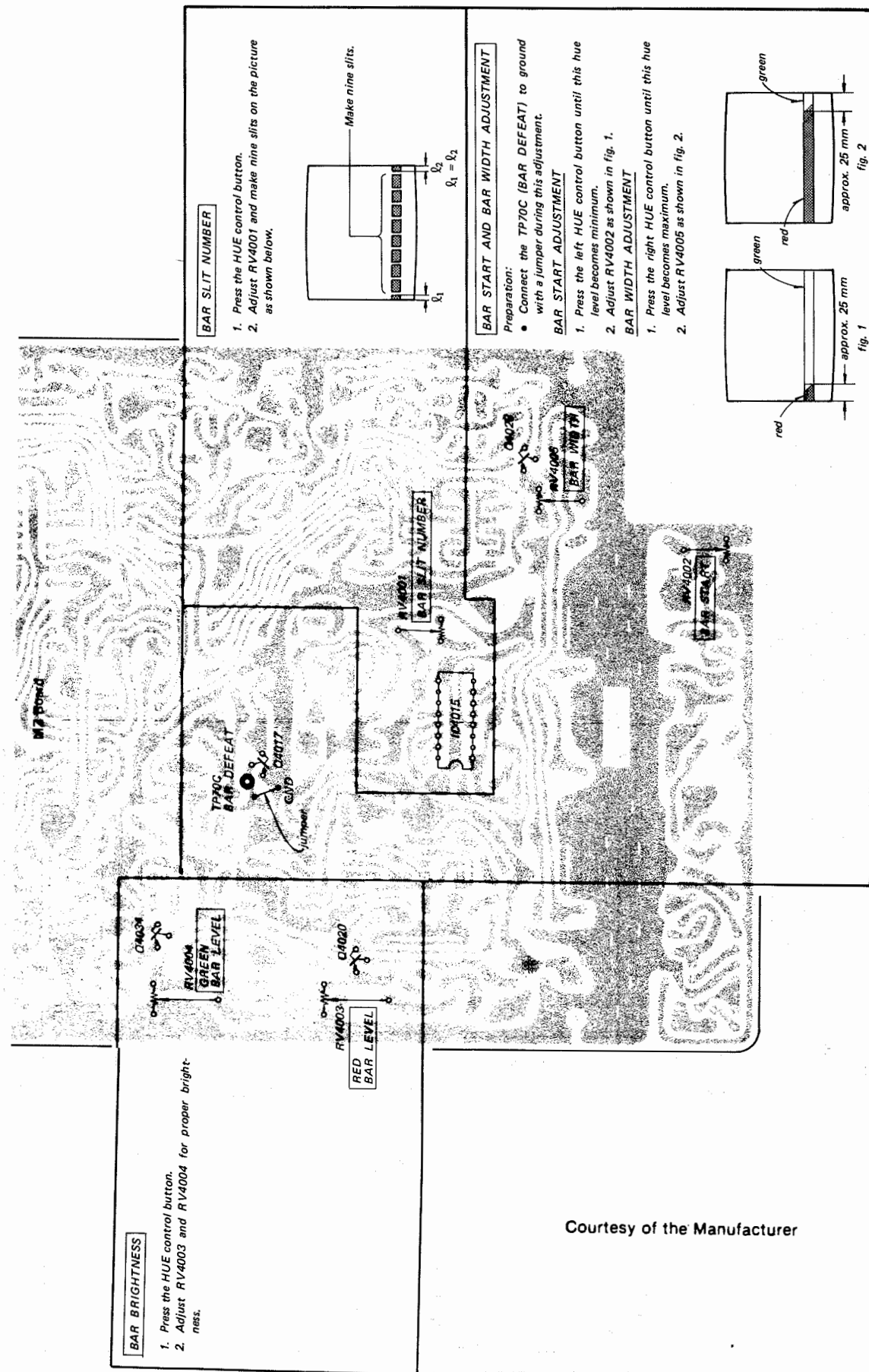


MZ BOARD

Courtesy of the Manufacturer

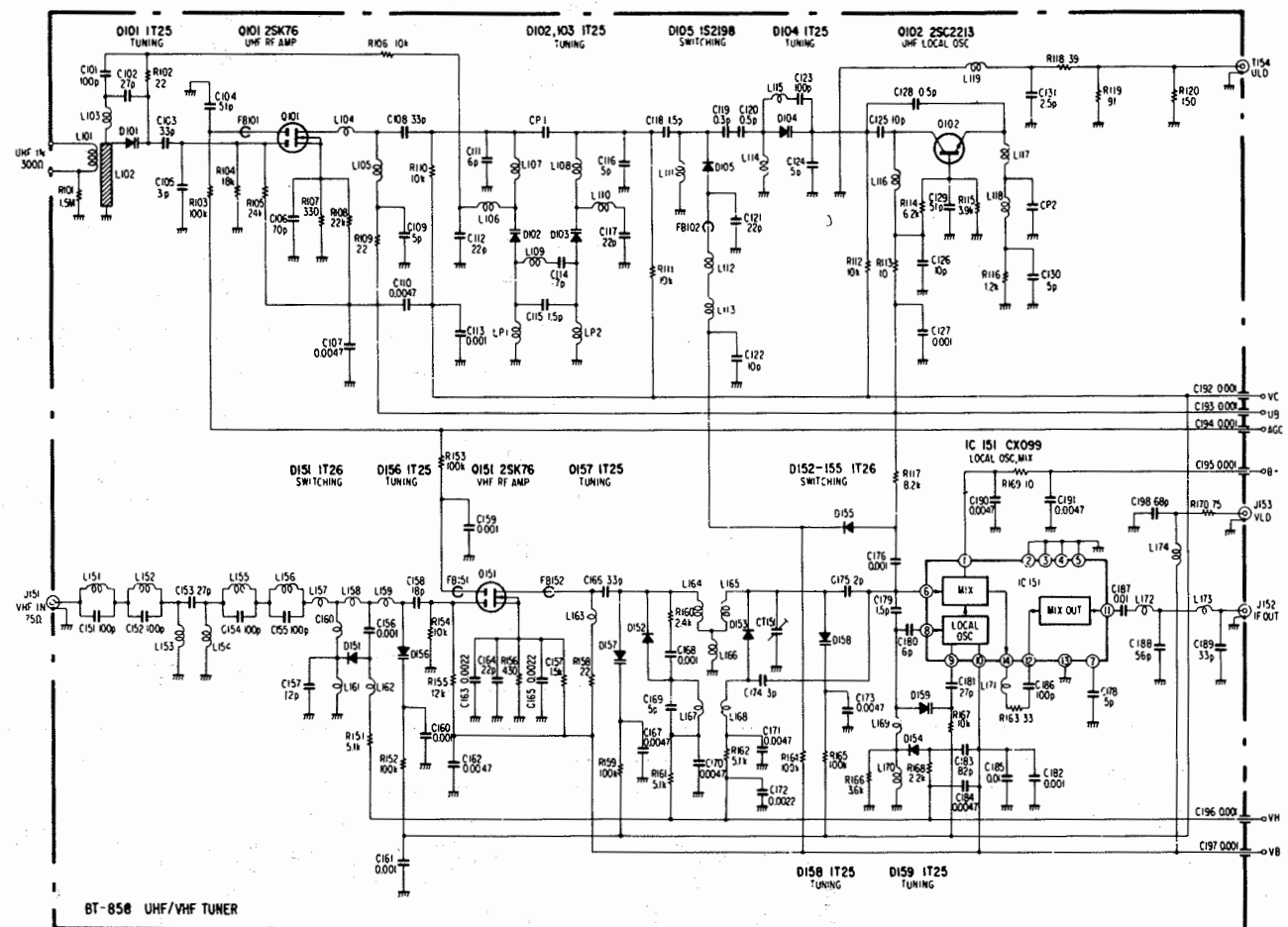
MJ/MK/N BOARDS



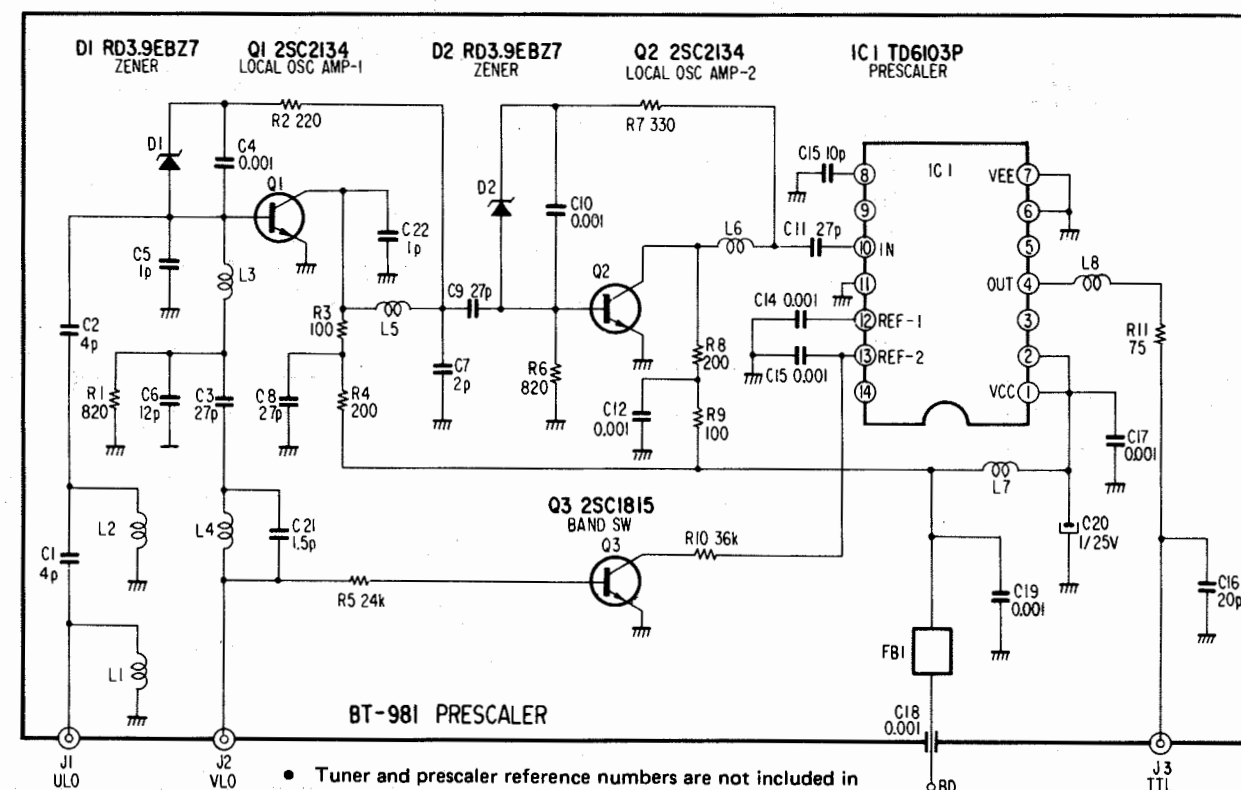


MZ BOARD ADJUSTMENTS

• BT-858

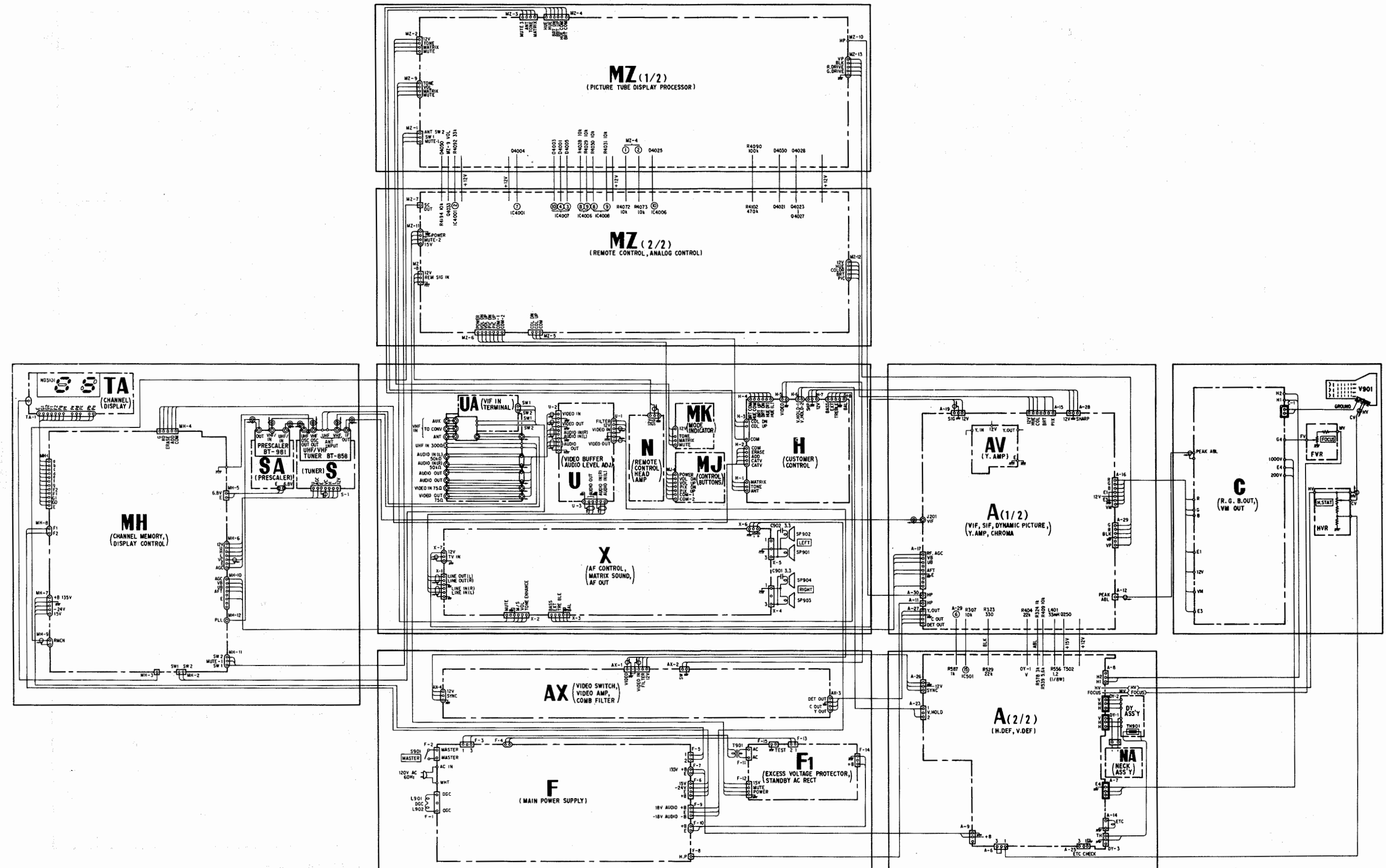


• BT-981



Courtesy of the Manufacturer

UHF/VHF TUNER, PRESCALER



Courtesy of the Manufacturer

FRAME SCHEMATIC

FRAME SCHEMATIC

MISCELLANEOUS ADJUSTMENTSCHANNEL PRETUNING

1. Connect antenna.
2. Depress Master On Button.
3. Momentarily Depress Power Button.
4. Using Remote Transmitter, momentarily depress numbered Button for channel to be pretuned.
5. Momentarily depress Add Button on main control panel. Channel readout will momentarily change to --, indicating that command has been accepted.
6. Repeat steps 4 and 5 for each channel to be pretuned.
7. Removing undesired channel from program.
8. Select channel to be removed from program.
9. Momentarily depress Erase Button. Channel readout will momentarily change to --, indicating that command has been accepted.

HORIZONTAL SIZE ADJUSTMENT

Tune in a picture and adjust Horizontal Size Control (L507) for proper horizontal size.

HORIZONTAL CENTERING ADJUSTMENT

Move Connector A-21 to one of the terminals (L, C or R) at Horizontal Centering, whichever gives the best horizontal centering.

VERTICAL CENTERING ADJUSTMENT

Move Connector A-22 to one of the terminals (U, C or D) at Vertical Centering, whichever gives the best vertical centering.

VHF AND UHF RF AGC ADJUSTMENT

Tune in a medium strength VHF TV station. Turn RF-AGC-VHF Control (RV201) until snow appears and then back off until snow just disappears.

Tune in a medium strength UHF TV station. Turn RF-AGC-UHF Control (RV202) until snow appears and then back off until snow just disappears.

SUB BRIGHT ADJUSTMENT

Tune in a TV station. Set Color Control to MINIMUM, Picture Control to Maximum, Bright Control to midrange. Adjust Sub Brightness Control (RV302) for a suitable brightness. Set Picture Control to midrange, check all channels to see that brightness does not change excessively.

SUB CONTRAST ADJUSTMENT

Tune in a TV station. Set Picture and Brightness Controls to midrange. Adjust Sub Contrast Control (RV301) for suitable contrast. Check all channels to see that contrast does not change excessively.

ACC ADJUSTMENT

Tune in a strong TV station. Set Color and Picture Controls to midrange. Adjust ACC Control (RV303) for suitable color intensity.

COLOR TEMPERATURE ADJUSTMENT

Connect a crosshatch generator to the antenna terminals and tune in a crosshatch pattern. Set the Brightness and Picture Controls to MINIMUM. Turn Green (RV702) and Blue (RV703) Drive Controls to Maximum. Turn Blue (RV706), Green (RV705) and Red (RV704) Background Controls to midrange. Turn Screen Control (RV701) to obtain a faintly visible crosshatch pattern. Adjust Background Controls for best white balance on the faintly visible pattern. Turn the Brightness and Picture Controls to Maximum. Adjust the Drive controls for best white balance on the pattern. Check tracking at high and low brightness levels and repeat procedure if necessary.

COLOR SYNC ADJUSTMENT

Connect a color bar generator to the antenna terminals and tune in a color bar pattern. Set Hue, Color and Picture Controls to mechanical center. Connect a 10K ohm resistor from TP5 to TP6 (Pin 30 to Pin 9 of IC301). Connect a jumper from TP8 to TP9 (Pin 15 to Pin 16 of IC301). Adjust CV301 until colors stop or slowly float. Remove resistor and jumper.

TINT CENTERING ADJUSTMENT (HUE)

Tune in a strong station. Set Hue Control to mechanical center. Adjust Hue Centering Control (RV304) for correct flesh tones.

HORIZONTAL FREQUENCY ADJUSTMENT

Tune in a station. Connect a .1MFD Capacitor from TP4 (Pin 16 to of IC501) to ground. Adjust Horizontal Frequency Control (RV501) until picture stops or slowly floats. Remove capacitor and check on all channels.

PINCUSHION ADJUSTMENT

Connect a color bar generator to the antenna terminals and tune in a crosshatch pattern. Adjust Pin Phase Control (RV504) and Pin Amp Control (RV503) for straight vertical lines at the sides of the screen.

CONVERTOR FREQUENCY ADJUSTMENT

Connect a color bar generator to the antenna terminals and set generator to purity position. Disconnect the horizontal pulse by removing the lead wire from terminal HP. Connect a Frequency Counter to Test Point TP39D. Adjust T606 for 15,734Hz \pm 50Hz. Reconnect lead wire at Terminal HP.

B+ CHECK

NOTE: Use a variable isolation transformer for this check. Connect a DC meter to TP97G, low side to ground. Set AC line voltage to 130V \pm 2V. Tune in a station and check meter reading. If meter does not read less than 136.4V DC, replace IC601.

MISCELLANEOUS ADJUSTMENTS (Continued)COMB FILTER ADJUSTMENT

Connect a color bar generator to the antenna terminals and tune in a color bar pattern. Connect scope to TP-13. Adjust Phase Adjust Control (RV6001) and T6001 for MINIMUM 3.58MHz component.

3.58MHz TRAP ADJUSTMENT

Connect a color bar generator to the antenna terminals and tune in a color bar pattern. Connect a jumper from Terminal 3 to Terminal 4 of DL6001. Set Filter/Normal Switch on antenna panel to filter position. Connect scope to TP13. Adjust T6002 for MINIMUM 3.58MHz component. Remove jumper.

PURITY ADJUSTMENTS

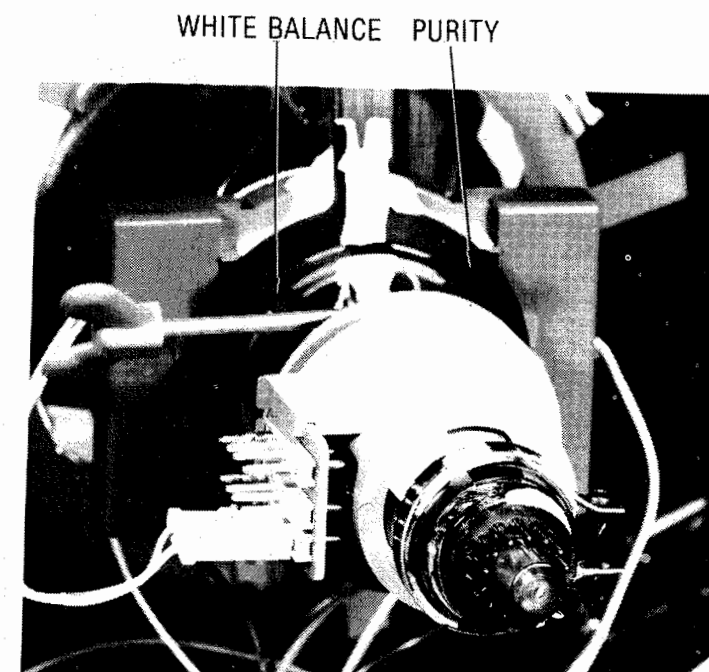
If the picture tube appears to be magnetized, use a degaussing coil to demagnetize picture tube and mounting brackets. Loosen deflection yoke and slide it forward as far as possible. Disconnect leads at B and G on C Board. Adjust purity rings on rear of deflection yoke to center the vertical red band. Slide the deflection yoke back until a uniform red screen is obtained. Reconnect leads at B and G. If necessary, use disc magnets to correct impurity at the corners of the screen. (See Parts List.) Place disc magnets at rear corners of the picture tube.

CONVERGENCE ADJUSTMENTS

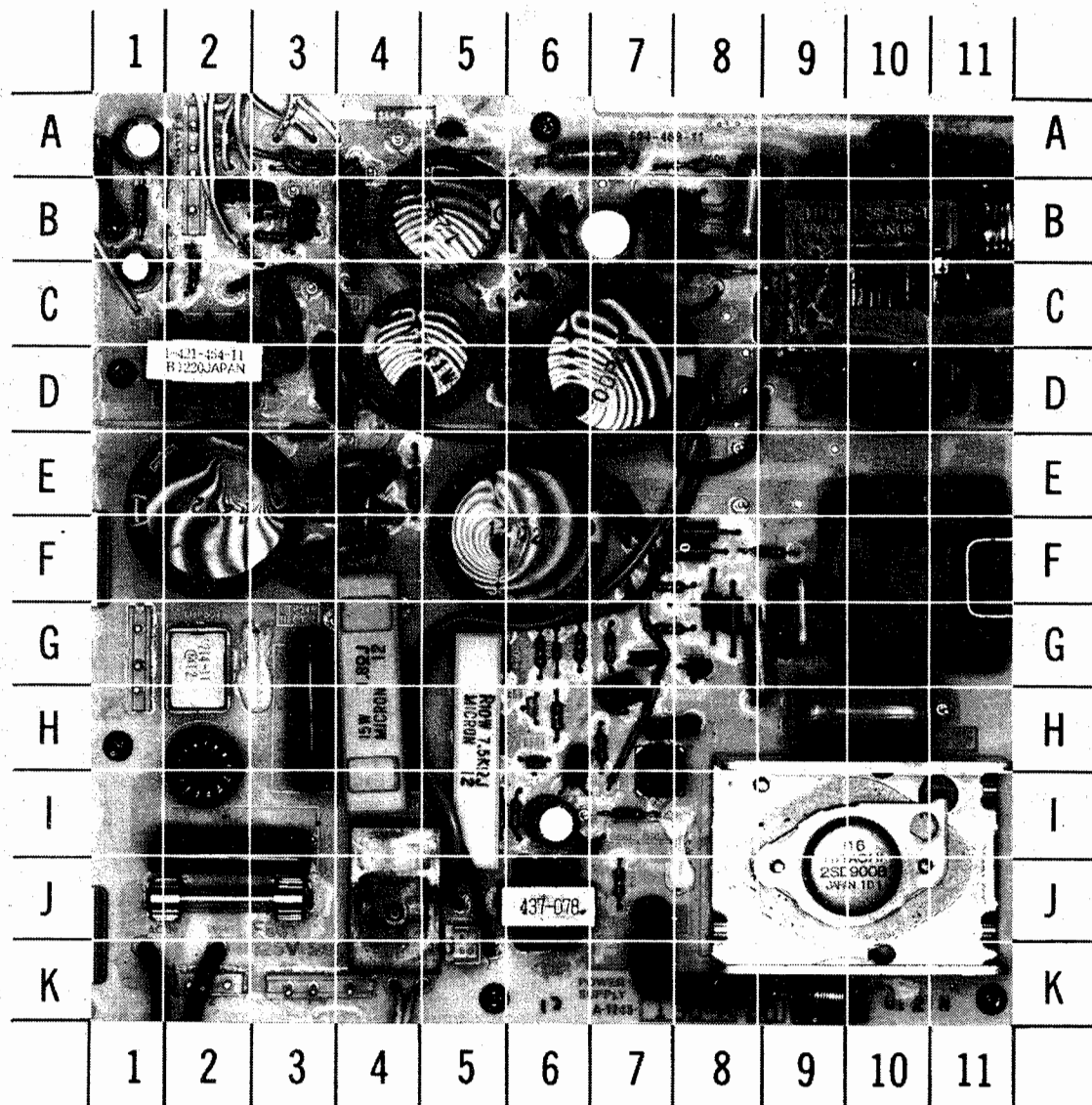
Connect a crosshatch generator to the antenna terminals and tune in a dot pattern. Adjust the Horizontal Static Control (RV901) to converge the red and blue dots horizontally over the green dot at the center of the screen. Rotate the vertical static magnets to converge the red and blue dots vertically over the green dot at the center of the screen. NOTE: Rotate the two Vertical Static Magnets equally, one to the right and one to the left from vertical position. NOTE: Some versions may use a BMC Magnet. To adjust the BMC Magnet slide it in and out to correct for insufficient horizontal static convergence. Rotate the BMC Magnet to correct for insufficient vertical static convergence. Place VTC (DY4) connector in any one of the three positions to converge the dots vertically.

Tune in a crosshatch pattern. If necessary, remove the rubber wedges between the deflection yoke and picture tube. Tilt the deflection yoke up or down to converge the vertical lines at the top and bottom of the screen and the horizontal lines at the right and left sides of the screen. Tilt the deflection yoke to the right or left to converge the horizontal lines at the top and bottom of the screen and vertical lines at the right and left sides of the screen. Replace the rubber wedges. To correct the convergence at the corners of the screen, slide a permalloy magnet assembly between the picture tube and the deflection yoke behind the areas affected on the screen. Position the permalloy assemblies for the best horizontal and vertical convergence correction in the corners affected.

Repeat appropriate convergence procedures if necessary to obtain the best overall convergence.



CRT NECK ASSEMBLY

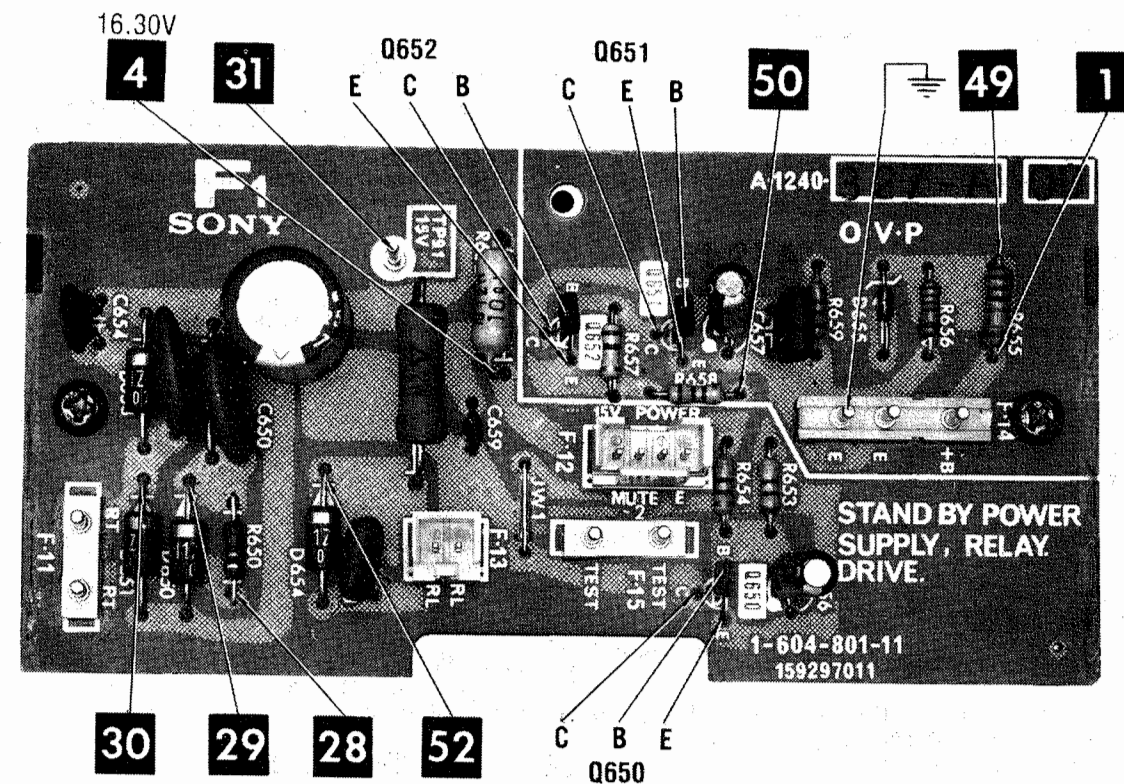


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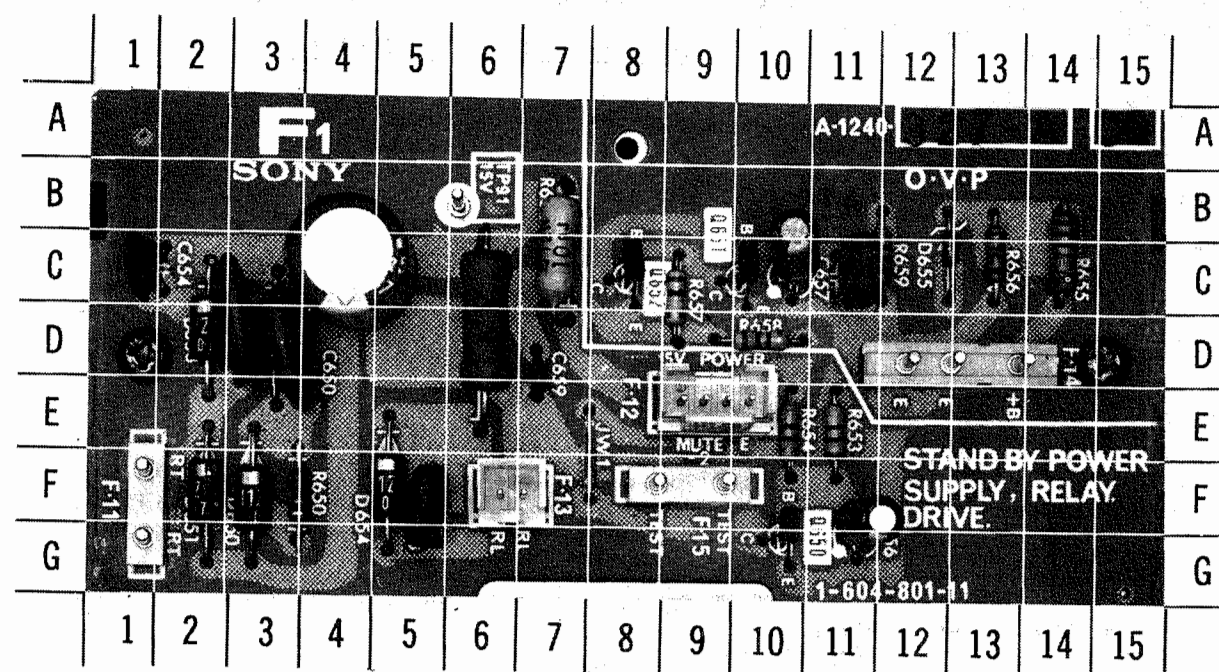
F BOARD

F BOARD GridTrace LOCATION GUIDE

C601	I-2	C624	B-5	C613	B-6	R602	E-4	R625	D-3
C602	H-3	C625	D-7	C614	A-5	R603	F-3	R626	A-6
C603	E-4	C626	B-2	C615	B-6	R604	H-5	R627	D-6
C604	F-4	C627	B-3	C616	A-11	R606	H-5	R628	B-3
C605	E-2	C628	G-7	C617	H-5	R607	G-6	R629	I-5
C606	F-6	C629	D-3	C618	F-8	R608	G-6	R630	B-3
C607	I-6	C630	A-5	F-1	G-1	R609	H-6	RL601	J-4
C608	H-7	C631	C-6	F-2	K-2	R610	G-6	T601	H-2
C609	H-7	C632	B-6	F-3	K-3	R611	I-6	T602	C-10
C610	I-6	C665	F-7	F-5	K-5	R612	G-7	T603	F-10
C612	F-7	D601	E-4	F-6	A-2	R613	H-7	T604	J-6
C613	H-10	D602	F-3	F601	J-2	R614	J-7	T605	D-2
C614	G-9	D603	G-6	HP	C-1	R615	I-7	T606	H-7
C615	C-3	D604	G-8	IC601	B-4	R616	F-9	THP601	G-2
C616	C-1	D605	G-8	L601	C-9	R617	K-8	TP91C	H-11
C617	A-1	D606	F-8	L602	K-9	R618	K-7	TP92A	E-8
C618	A-10	D607	D-2	Q601	H-6	R619	G-7	TP93D	I-6
C619	B-7	D608	D-2	Q602	J-10	R620	F-7	TP95E	B-1
C620	B-8	D609	A-8	Q603	G-8	R621	G-9	TP96F	A-4
C621	B-8	D610	C-8	Q604	H-6	R622	G-7	TP97G	C-3
C622	B-7	C611	B-8	Q605	H-6	R623	C-2	TP98	A-4
C623	D-4	C612	B-6	R601	H-4	R624	B-1	TP99	B-3



A Howard W. Sams CIRCUITTRACE® Photo



F1 BOARD

A Howard W. Sams GRIDTRACE™ Photo

F1 BOARD GridTrace LOCATION GUIDE

C650	D-3	C658	C-11	C655	C-12	Q651	C-10	R655	C-14
C651	D-3	C659	D-7	F-11	F-1	Q652	C-8	R656	C-13
C653	F-5	D650	F-3	F-12	E-9	R650	F-4	R657	C-9
C654	C-1	D651	F-2	F-13	F-6	R651	D-6	R658	D-10
C655	C-4	D652	D-3	F-14	D-13	R652	C-7	R659	C-12
C656	F-11	C653	D-2	F-15	F-9	R653	E-11		
C657	C-10	C654	F-5	Q650	F-10	R654	E-10		

CIRCUIT DESCRIPTION

CONTROL CIRCUIT POWER MODULE (IC601)

The Power Module IC (IC601) detects the B+ voltage (135V) at pin 1 and feeds a control current from pin 4 to the control winding pins 13 and 14 of the Power Output Transformer (T602), to keep the 135V constant. When the B+ voltage (135V) increases, the voltage at pin 4 of IC601 will increase causing the control winding to saturate the Power Output Transformer which will decrease the output voltage. When the B+ voltage (135V) drops, the opposite action takes place.

OVER-VOLTAGE PROTECTION

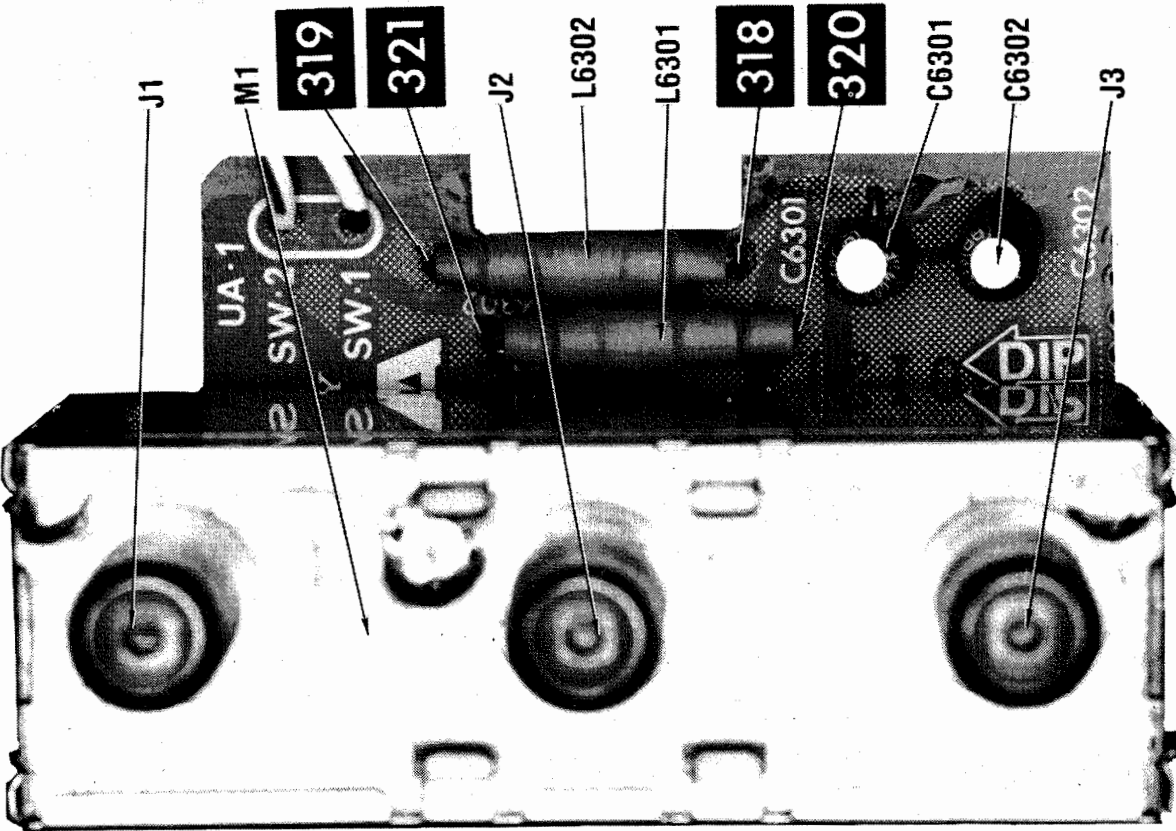
When B+ (135V) increases too high the Zener Diode D655 will conduct, as a result the excess voltage protector circuit Switch-2 Transistor (Q651) and Switch-1 Transistor (Q652) will be turned On causing a drop of the voltage at the base of the Relay Drive Transistor (Q650) which will turn the Sub-Power Supply Relay (RL601) Off. To help in isolating the problem, connect a jumper lead between the two Test pins of F-15. If the set comes On, troubleshoot the remote board. If the set will not come On, troubleshoot the power supply board.

HIGH VOLTAGE HOLD DOWN CIRCUIT

If the high voltage exceeds 28KV, the HV hold down circuit will be activated to shut down the set. The voltage at the base of the HV Hold Down Transistor (Q505) will rise over 13V, the Transistor Q505 will be turned On causing the HV Hold Down Transistor (Q506) to turn On, the current will flow through the Transistor Q506 across resistors R536 and R506 and apply voltage to pin 5 of Sync/Vert Osc/ Horiz Osc IC (IC501) which will shut down the predrive section of the horizontal circuit, that will shut down the set. To check voltages when the hold down circuit is activated, see voltage chart. If B+ will rise for any reason more than 125V, the voltage will increase at pin 6 of IC501 and shut down the predrive section of the horizontal circuit which will shutdown the set.

Voltages are taken while hold down circuit is activated.

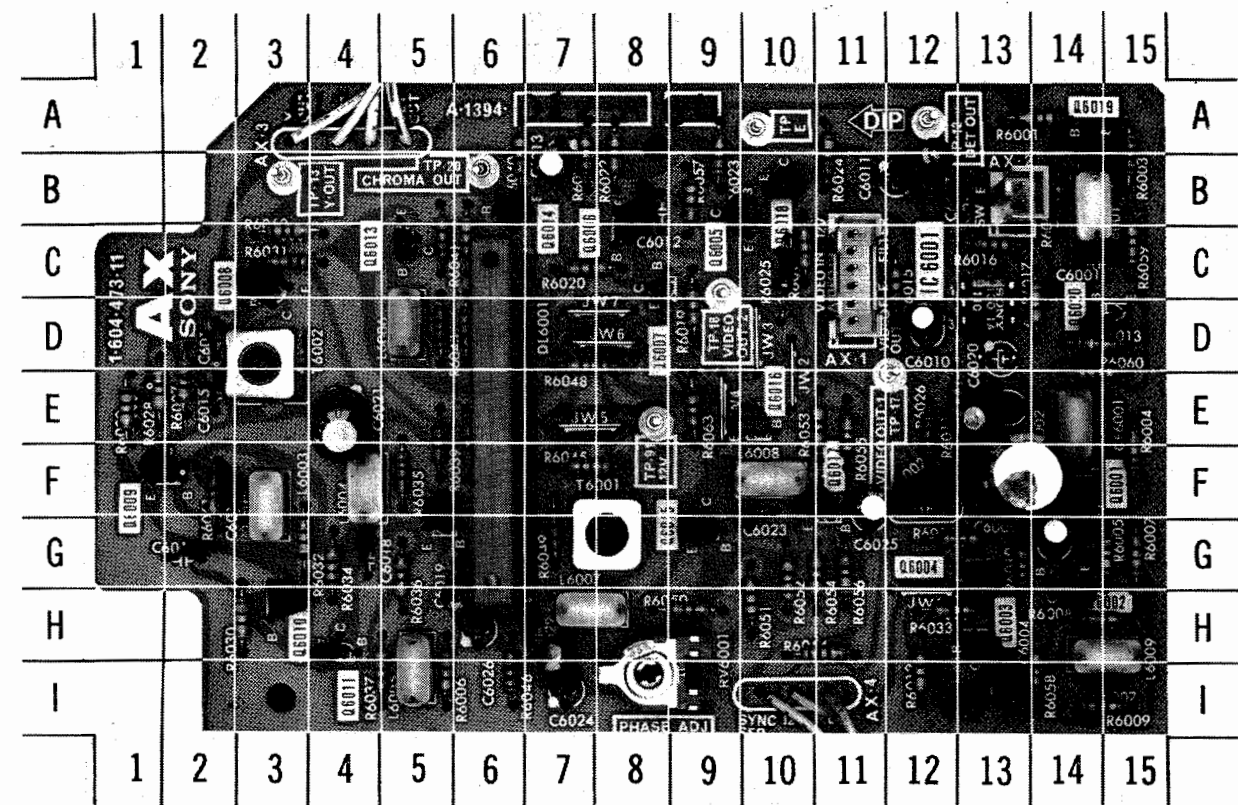
Base of Q505	14.60V
Emitter of Q505	14.20V
Emitter of Q506	13.60V
Pin 5 of IC501	5.46V
Pin 6 of IC501	5.60V



RESISTANCE MEASUREMENTS

MEASUREMENTS BELOW TAKEN WITH METER HAVING .08V MAX BETWEEN PROBE TIPS														
ITEM	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8	PIN 9	PIN 10	PIN 11	PIN 12	PIN 13	PIN 14
IC201	0	27K	27K	32K	3290	0	0	INF	12K	2100	2110	0	117	3470
	PIN 15	PIN 16	PIN 17	PIN 18	PIN 19	PIN 20	PIN 21	PIN 22	PIN 23	PIN 24	PIN 25	PIN 26	PIN 27	PIN 28
	35K	355	INF	31K	6500	INF	219	0	0	0	0	0	.9	INF
	PIN 29	PIN 30	PIN 31	PIN 32	PIN 33	PIN 34	PIN 35	PIN 36	PIN 37	PIN 38	PIN 39	PIN 40	PIN 41	PIN 42
	2120	0	218	21K	21K	0	0	INF	330K	138K	99K	INF	INF	0
IC301	218K	578	INF	INF	243K	2.6	119	9850	0	119	16K	INF	33K	INF
	PIN 15	PIN 16	PIN 17	PIN 18	PIN 19	PIN 20	PIN 21	PIN 22	PIN 23	PIN 24	PIN 25	PIN 26	PIN 27	PIN 28
	INF	INF	INF	3260	435	11K	10K	9290	443	2180	2050	INF	INF	INF
	PIN 29	PIN 30	PIN 31	PIN 32	PIN 33	PIN 34	PIN 35	PIN 36	PIN 37	PIN 38	PIN 39	PIN 40	PIN 41	PIN 42
	INF	125K	2010	INF	1.9M(1)	1.9M(1)	5590	19	83K	29K	INF	INF	INF	INF
IC302	2390	INF	INF	985K	45K	15K	20K	INF	0	2910	23K	24K	57K	970K
IC501	63K	23K	294	0	6980	77K	0	1258	53K	420K	7590	INF(1)	6030	308
											PIN 15	PIN 16	PIN 17	PIN 18
											2050	96K	9020	15K
IC502	0	0	INF	INF	INF	INF	1478	5820	30K	45K	INF(1)	INF(1)		
IC601	12K	5220	0	105	571									
IC5001	68K	8560	69K	0	9570	75K	75K	19K	19K	1112	1110	18K	3510	12K
	PIN 15	PIN 16	PIN 17	PIN 18	PIN 19	PIN 20	PIN 21	PIN 22	PIN 23	PIN 24	PIN 25	PIN 26	PIN 27	PIN 28
	INF	10K	10K	119	76K	76K	46K	47K	13K	13K	47K	46K	15K	15K
IC5002	INF	79K	13K	13K	118	0	51K	50K	INF	9100	0	902	898	35K
											PIN 15	PIN 16	PIN 17	PIN 18
											197	22K	119	0
IC5003	35K	898	INF	INF	INF	INF	INF	INF	9080	0	INF	901	0	119
IC5004	7.36	INF	5500	30K	99K	INF	100K	91K	0	INF				
IC5005	7.42	INF	5500	30K	99K	INF	100K	91K	0	INF				
IC6001	INF	0	13K	114	13K	5640								
V1	INF	INF	2.3M	69K	FIL	FIL	69K	650K	650K	650K	69K	2.3M		
ITEM	E	B	C		ITEM	E	B	C		ITEM	E	B	C	
Q1	1910	2840	930		Q650	0	4690	6750		Q6005	444	INF	115	
Q250	115	331	114		Q651	0	9800	109K		Q6006	348	13K	1110	
Q301	0	1096	4010		Q652	9470	109K	9800		Q6007	382	1110	0	
Q401	333	2130	980K		Q701	159	3070	124		Q6008	0	992	INF	
Q402	985	930	115		Q703	450	89K	479		Q6009	956	1317	115	
Q501	0	356	15K		Q704	276	INF	625K		Q6010	359	1893	1318	
Q502	0	.31	13K		Q705	240	1.6M(1)	623K		Q6011	1893	1146	0	
Q503	1115	2050	1001		Q706	234	1.6M(1)	621K		Q6012	679	1581	795	
Q504	99	1001	INF		Q707	9280	10K	613K		Q6013	1114	288	0	
Q505	INF	155K	23K		Q708	9260	10K	611K		Q6014	1002	288	1150	
Q506	17K	INF	17K		Q709	1198	1661	115		Q6015	191	2000	337	
Q507	305	36K	1211		Q801	89	2170	153		Q6016	575	580	115	
Q601	0*	940*	24K*		Q5001	0	56K	11K		Q6017	470	5270	580	
Q602	.3*	.2*	INF*		Q6001	991	4400	115		Q6018	INF	15K	115	
Q603	0*	471*	24K*		Q6002	573	4460	2540		Q6019	1001	INF	1096	
Q604	0*	4660*	24K*		Q6003	933	2540	115		Q6020	4130	1678	0	
Q605	94K*	13K*	5660*		Q6004	464	933	115		Q6021	2170	5280	214	

* With respect to the common tie point.
(1) Reading depends on polarity of meter connections.

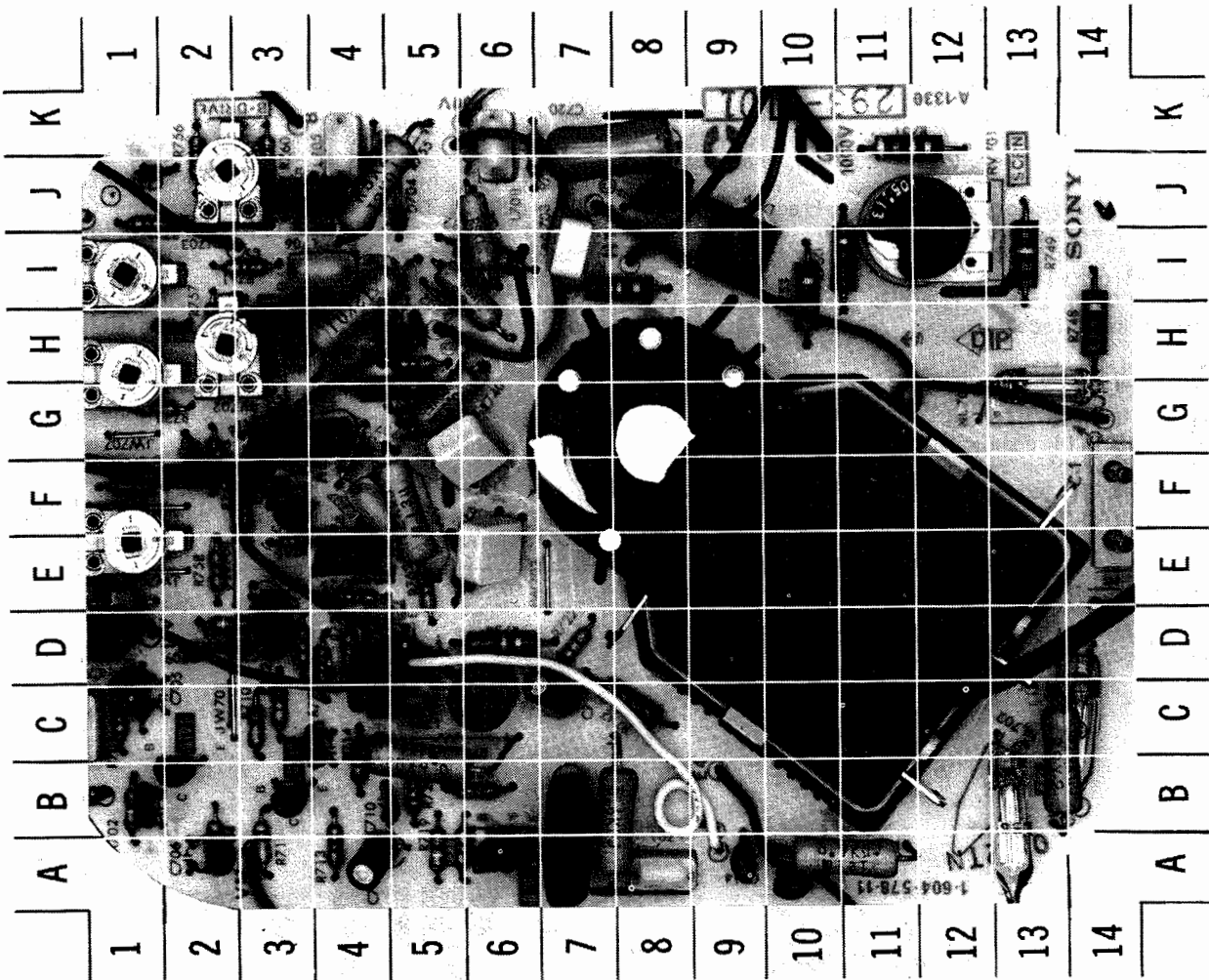


A Howard W. Sams GRIDTRACE™ Photo

AX BOARD

AX BOARD GridTrace LOCATION GUIDE

AX-1	C-11	C6027	B-12	Q6014	B-6	R6020	C-7	R6046	I-6
AX-2	B-13	CF6001	F-15	Q6015	G-9	R6021	B-7	R6048	D-7
C6001	C-14	DL6001	D-6	Q6016	F-10	R6022	B-8	R6049	G-7
C6002	F-12	IC6001	C-13	Q6017	F-11	R6023	B-9	R6050	F-9
C6004	I-13	L6001	B-14	Q6018	B-10	R6024	B-11	R6051	F-10
C6005	G-14	L6002	F-14	Q6019	A-14	R6025	C-10	R6052	G-10
C6006	G-14	L6003	F-3	Q6020	D-14	R6026	F-12	R6053	F-11
C6007	I-14	L6004	F-4	R6001	A-14	R6027	F-2	R6054	G-10
C6008	F-13	L6005	I-5	R6002	B-14	R6028	F-1	R6055	F-11
C6009	F-13	L6006	D-5	R6003	B-15	R6029	F-1	R6056	G-11
C6010	D-12	L6007	H-7	R6004	F-15	R6030	H-3	R6057	B-9
C6011	B-12	L6008	F-10	R6005	G-15	R6031	C-3	R6058	I-14
C6012	B-8	L6009	F-15	R6006	I-5	R6032	G-3	R6059	C-15
C6013	B-7	Q6001	H-14	R6007	G-15	R6033	H-12	R6060	F-14
C6014	D-2	Q6002	H-14	R6008	H-14	R6034	G-4	R6061	F-14
C6015	F-2	Q6003	H-13	R6009	I-15	R6035	F-5	R6062	C-3
C6016	G-2	Q6004	G-13	R6010	G-13	R6036	G-5	R6063	F-9
C6017	T-2	Q6005	B-9	R6011	F-12	R6037	I-4	R6064	H-11
C6018	G-4	Q6006	B-8	R6012	I-12	R6038	F-6	RV6001	I-8
C6019	C-6	Q6007	C-8	R6013	D-14	R6039	F-5	T6001	G-8
C6021	F-4	Q6008	C-3	R6014	G-13	R6040	B-6	T6002	D-3
C6022	H-7	Q6009	T-1	R6015	C-12	R6041	C-5	TP12	A-12
C6023	G-10	Q6010	H-3	R6016	C-13	R6042	C-6	TP13	B-3
C6024	C-7	Q6011	H-4	R6017	D-14	R6043	D-5	TP17	F-12
C6025	F-11	Q6012	F-5	R6018	C-10	R6044	D-6	TP18	C-9
C6026	H-6	Q6013	C-5	R6019	D-9	R6045	F-7	TP20	B-6
								TP91	F-8



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C BOARD

C BOARD GridTrace LOCATION GUIDE

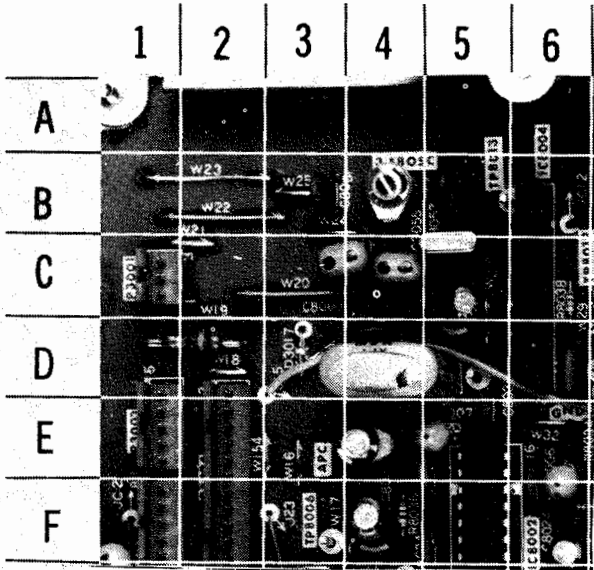
C701	B-1	Q707	A-6	R756	K-2
C702	D-1	Q708	D-14	R757	H-2
C703	D-1	Q709	F-3	R758	E-2
C705	C-1	R701	C-1	R759	K-7
C706	A-2	R702	B-1	R760	K-3
C708	D-2	R703	C-1	R761	I-3
C709	D-2	R704	A-2	R762	E-5
C710	B-4	R710	C-3	R763	G-4
C711	C-3	R711	C-3	R764	G-2
C712	A-4	R712	C-3	R765	E-3
C713	D-3	R713	A-4	R766	F-3
C714	A-9	R714	B-4	R767	I-12
C715	A-10	R716	B-6	RV701	H-2
C718	C-7	R717	B-7	RV702	J-2
C719	J-8	R718	A-5	RV703	E-1
C720	K-7	R719	B-5	RV704	H-1
C721	J-1	R720	D-4	RV705	I-1
C722	H-2	R721	D-7	SG706	E-6
C723	G-2	R722	D-4	SG707	G-6
C724	A-7	R723	B-5	SG708	I-7
C725	G-3	R724	E-4		
C726	H-5	R725	D-2		
CV301	E-13	R726	D-3		
D701	G-5	R727	C-13		
D702	I-5	R728	A-11		
D703	J-4	R729	I-6		
D704	J-5	R732	J-1		
D705	F-4	R733	D-6		
D706	H-4	R734	I-6		
E-2	A-8	R735	H-4		
L701	C-5	R736	G-5		
L702	I-4	R737	G-1		
L703	C-6	R738	G-5		
L705	K-4	R740	F-5		
L706	I-4	R741	F-1		
L707	F-4	R742	E-6		
L708	K-6	R744	G-5		
L709	I-9	R745	H-5		
L710	C-1	R746	C-8		
NL701	O-14	R747	H-14		
NL702	B-13	R748	I-13		
NL705	G-13	R749	I-11		
Q701	B-2	R750	K-11		
Q703	B-3	R751	I-8		
Q704	J-3	R752	I-10		
Q705	H-3	R753	I-6		
Q706	E-4	R754	J-4		
		R755			

GridTRACE INSTRUCTIONS

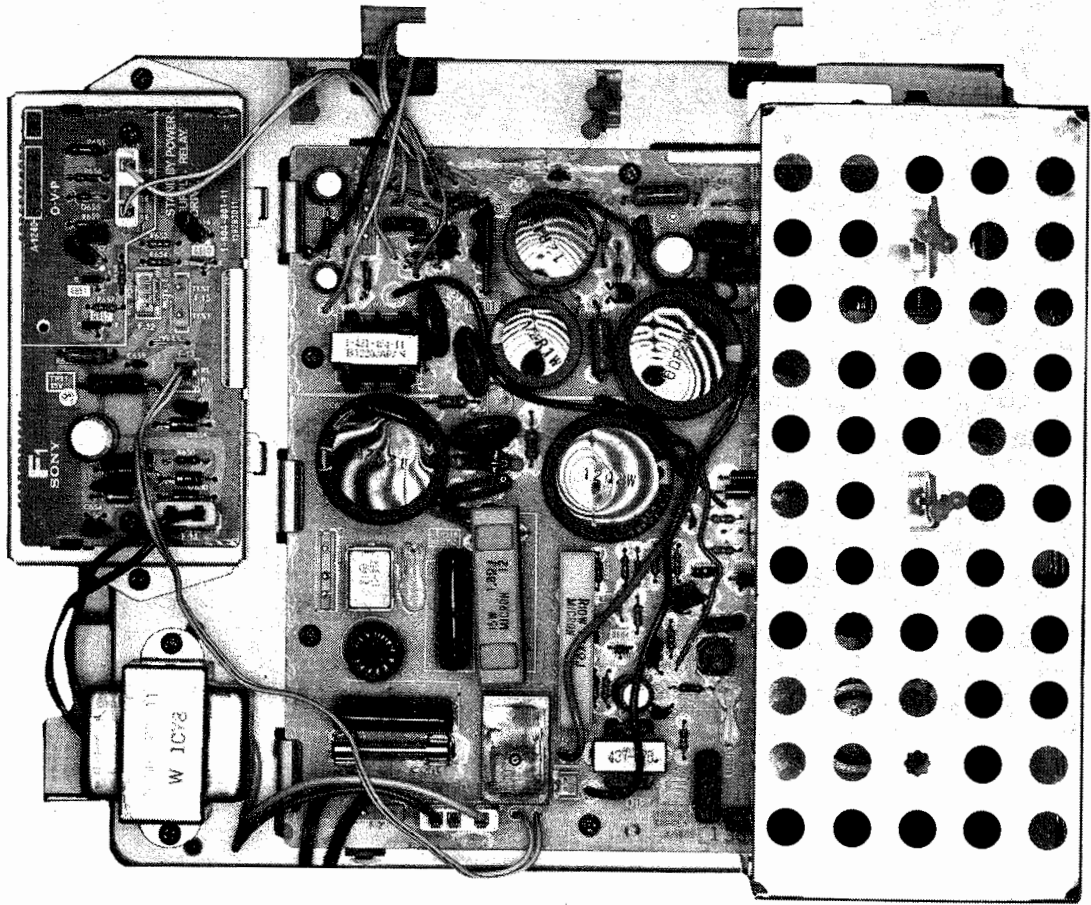
- 1. Locate item numbers and grid coordinates on GridTrace location guide.
- 2. Locate component on GridTrace photo using grid coordinates.
- 3. Item numbers on PC Board are used for positive identification of components.

GridTRACE LOCATION GUIDE

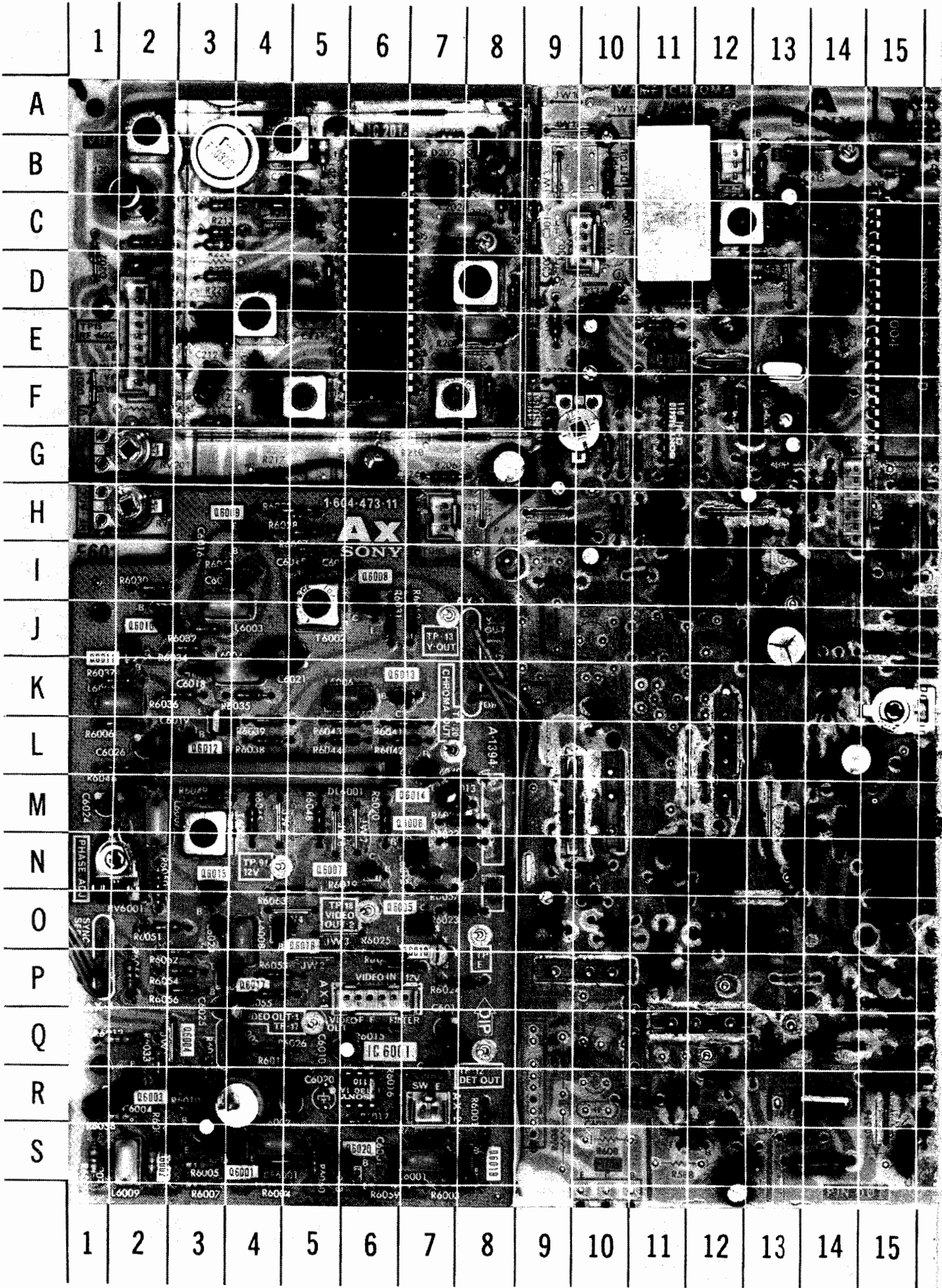
C8022	F-6	D3017	D-3
C8024	F-6	IC8002	F-5
C8025	F-6	IC8004	B-6
C8028	D-6	L8006	E-6
C8030	E-4	L8007	E-5
C8031	D-4	L8011	C-3
C8032	E-5	L8012	C-4
C8033	F-4	P3001	C-1
C8034	F-4	P3003	E-1
C8035	E-4	P3006	E-2
C8050	C-4	R3212	D-2
C8051	C-5	R8032	F-6
C8053	B-5	R8036	F-4
C8054	B-5	TP8006	F-3
C8055	B-4	TP8013	B-5
C8056	B-4	X8001	D-4
C8061	B-3	X8002	C-5



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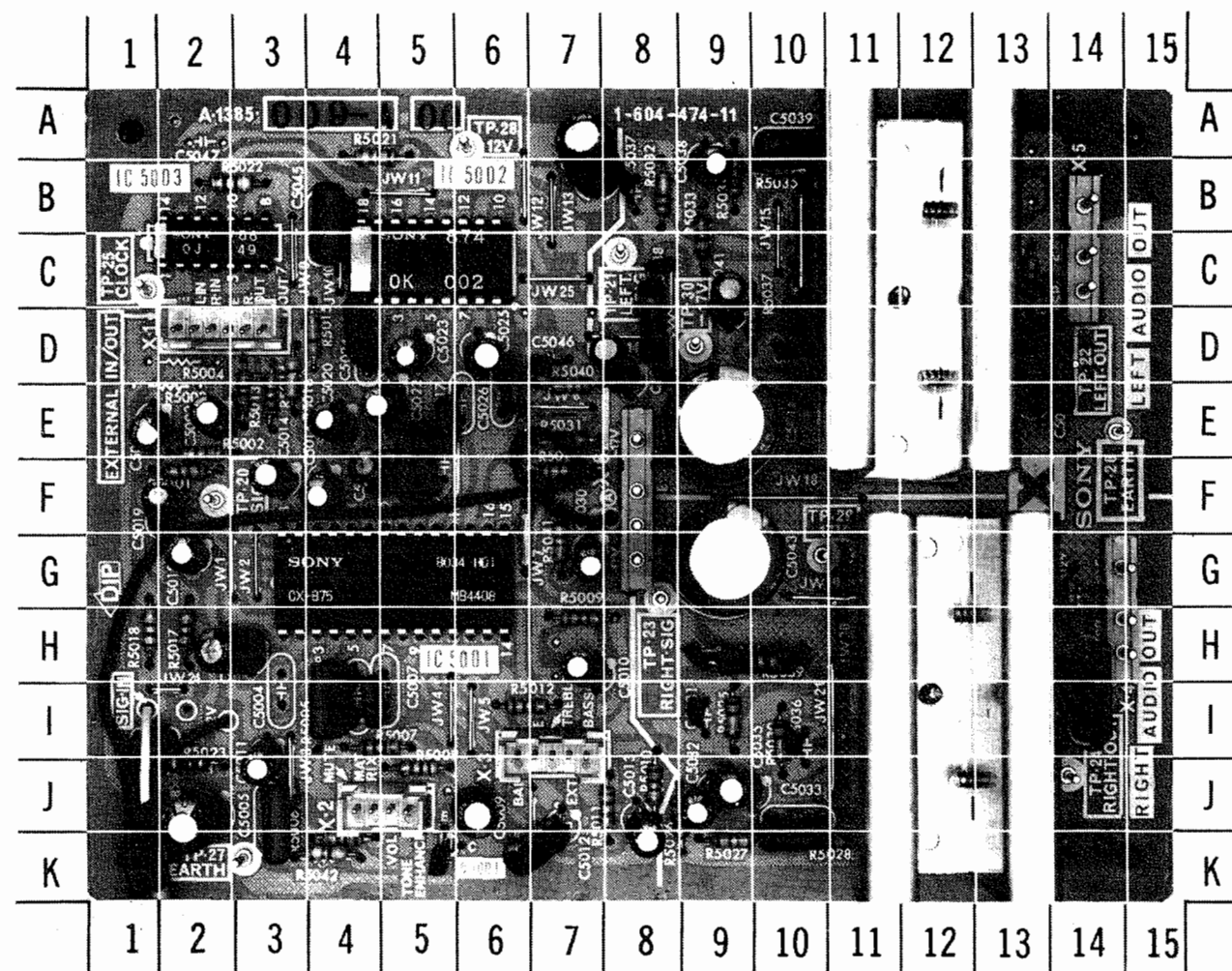


F BOARD-SHIELD LOCATION



A BOARD

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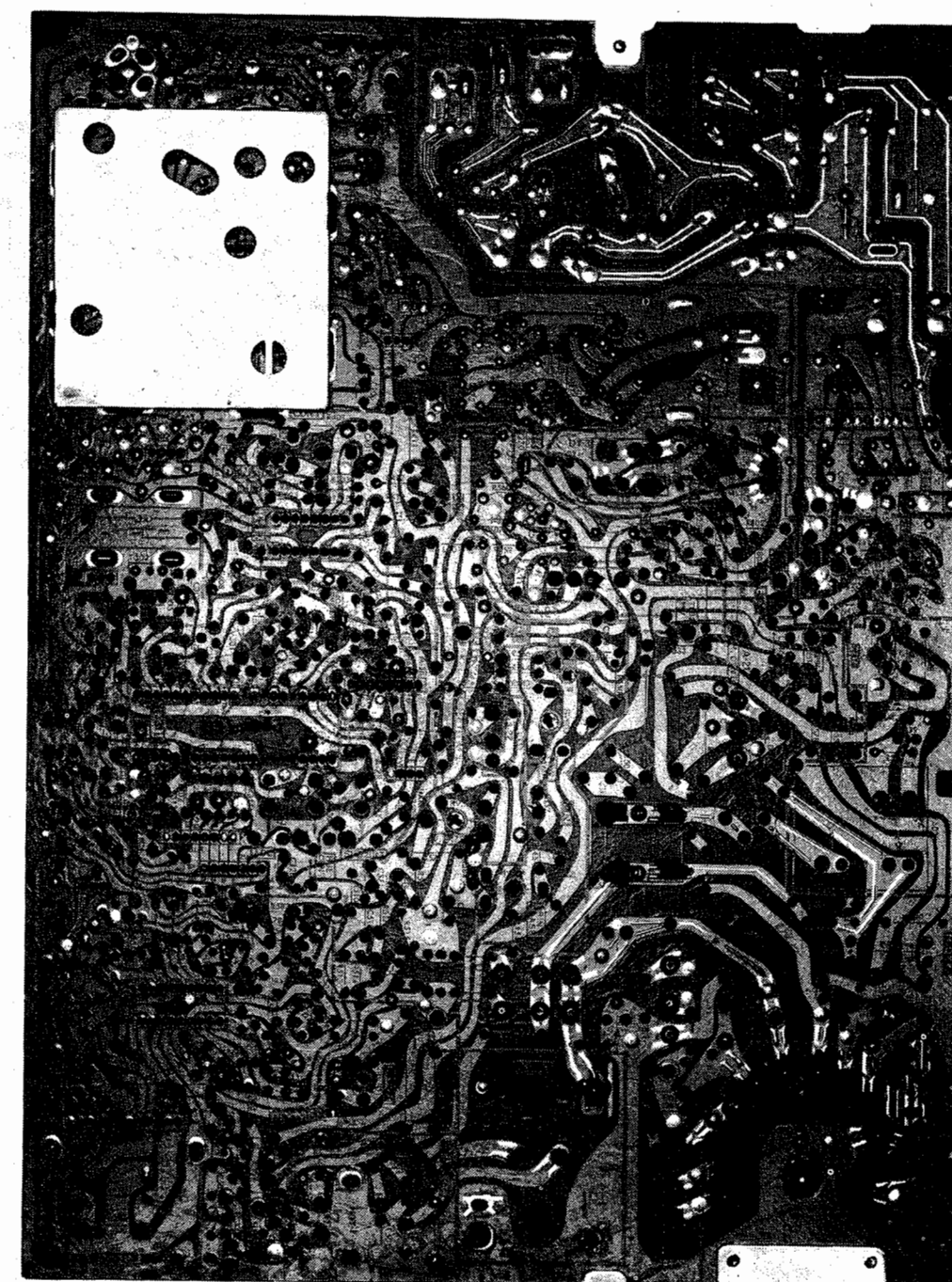


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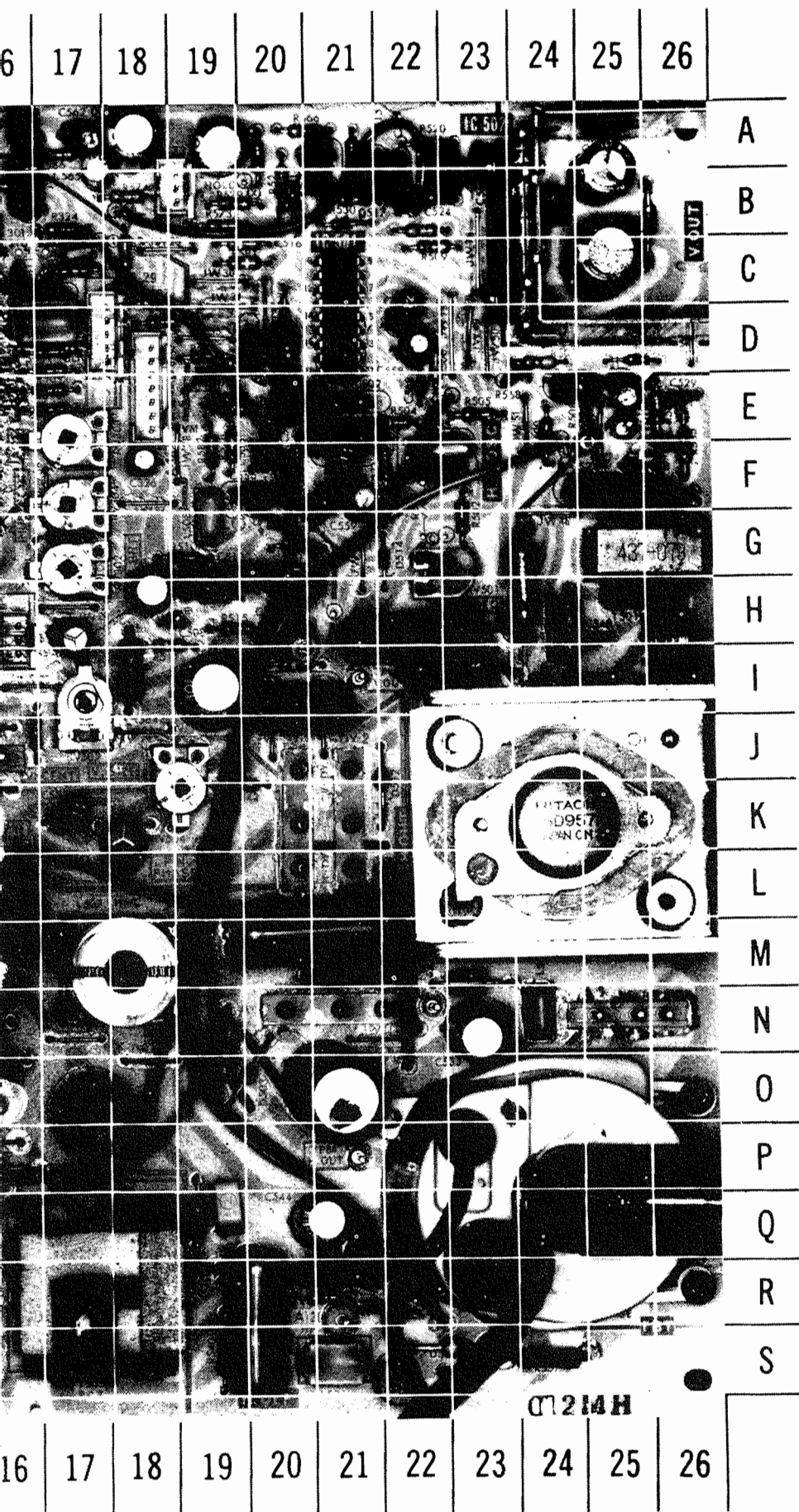
X BOARD

X BOARD GridTrace LOCATION GUIDE

C5001	E-1	C5024	D-4	C5045	B-4	R5015	D-4	R5037	D-10
C5002	E-2	C5025	D-6	C5046	D-7	R5016	D-3	R5038	D-8
C5003	H-2	C5026	E-6	IC5001	G-4	R5017	H-2	R5039	H-10
C5005	J-3	C5027	B-7	IC5002	C-5	R5018	H-1	R5040	E-7
C5006	I-4	C5028	J-2	IC5003	C-2	R5021	A-4	R5041	G-7
C5007	I-4	C5029	D-8	IC5004	I-13	R5022	B-2	R5042	K-4
C5009	J-6	C5030	G-7	IC5005	C-12	R5023	J-2	TP21	C-8
C5010	H-7	C5031	I-9	Q5001	K-5	R5024	F-7	TP22	D-14
C5011	J-3	C5032	J-9	R5001	F-2	R5025	I-9	TP23	G-8
C5012	K-7	C5033	K-10	R5002	E-2	R5026	J-8	TP24	J-14
C5013	K-8	C5034	I-14	R5005	I-4	R5027	K-9	TP25	C-1
C5014	F-3	C5035	J-9	R5006	K-4	R5028	K-11	TP28	A-6
C5015	F-4	C5036	I-10	R5007	I-4	R5029	G-14	TP29	G-10
C5016	F-5	C5037	B-8	R5008	J-5	R5030	I-10	TP30	D-9
C5017	E-5	C5038	B-9	R5009	H-7	R5031	E-7	X-1	D-3
C5018	G-2	C5039	A-10	R5010	J-8	R5032	B-8	X-2	J-5
C5019	F-1	C5040	D-13	R5011	J-8	R5033	C-9	X-3	J-7
C5020	E-4	C5041	C-9	R5012	J-6	R5034	B-9	X-4	G-14
C5021	F-4	C5042	D-10	R5013	E-3	R5035	B-10	X-5	B-14
C5022	E-4	C5043	G-9	R5014	E-3	R5036	C-13	X-6	E-8
C5023	D-5	C5044	E-9						



SONY MODEL
KV-2648R (CH.SCC-338E-A)



A BOARD GridTrace LOCATION GUIDE

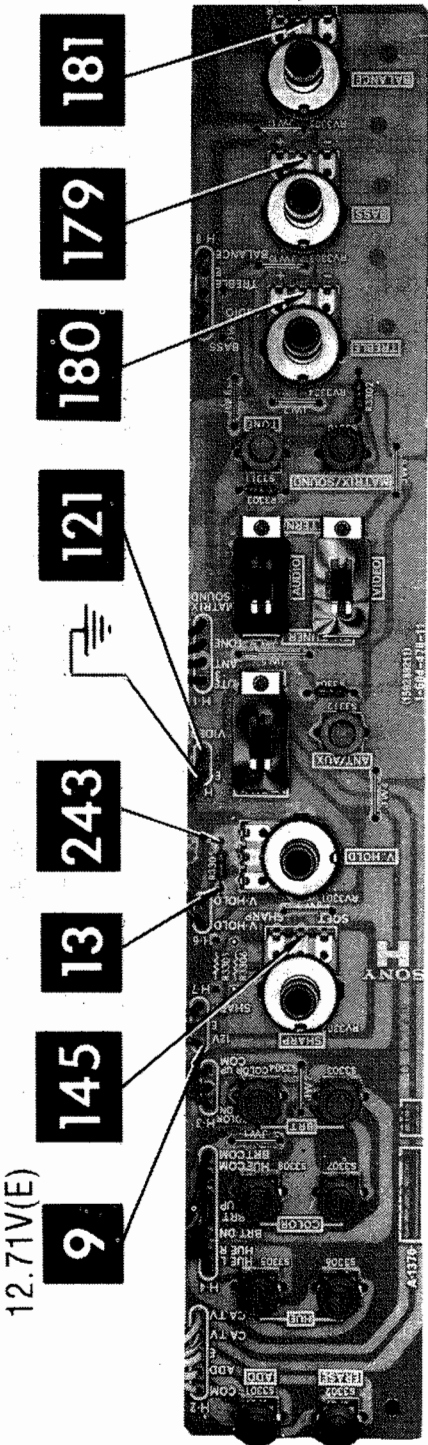
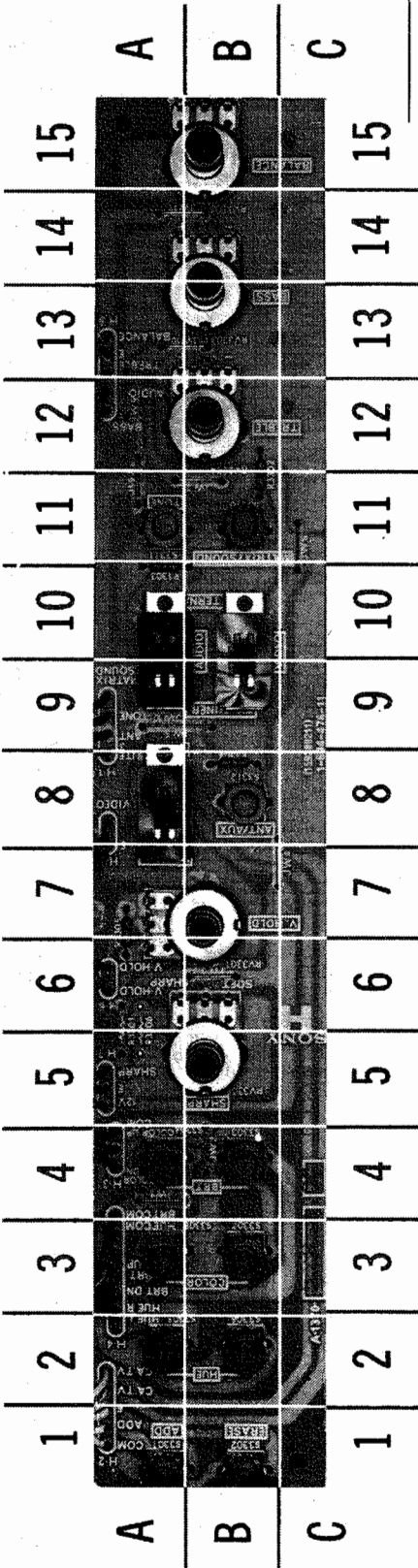
A-6	Q-12	C415	B-13	D501	D-25	R251	N-11	R528	F-19	T202	D-8
A-7	N-20	C500	F-21	D502	B-26	R301	B-10	R529	B-19	T203	E-4
A-8	N-25	C501	F-21	D503	Q-20	R303	G-10	R530	B-21	T204	F-7
A-9	Q-11	C502	E-21	D504	M-23	R304	C-14	R531	J-16	T205	F-5
A-11	M-12	C503	F-22	D505	S-27	R305	Q-13	R532	K-16	T206	A-2
A-12	I-8	C504	F-23	D506	Q-14	R306	F-9	R533	N-13	T302	C-12
A-14	M-10	C506	D-22	D508	P-16	R307	C-18	R534	H-24	T501	G-26
A-15	H-14	C507	E-25	D509	P-16	R309	D-17	R535	F-26	T502	P-24
A-16	E-18	C508	H-19	D510	Q-13	R310	E-17	R536	R-11	T503	R-17
A-17	F-2	C509	I-19	D512	J-22	R311	E-17	R537	R-11	TH201	D-2
A-19	H-7	C510	G-19	D513	B-20	R312	F-13	R538	P-14	TH801	K-10
A-21	Q-15	C511	H-20	D514	G-22	R313	F-13	R539	R-21	TP2	B-7
A-22	J-15	C512	H-20	D515	D-20	R314	F-14	R540	S-19	TP3	D-15
A-23	Q-19	C513	I-20	D517	B-21	R316	G-14	R541	N-19	TP4	D-21
A-25	P-9	C514	B-22	DL301	B-11	R317	H-15	R542	K-19	TP5	E-16
A-26	Q-12	C515	B-21	DY-1	J-20	R318	G-15	R543	K-14	TP6	D-15
A-27	C-10	C516	B-20	DY-2	J-21	R320	B-16	R544	K-14	TP8	F-15
A-28	I-16	C517	D-20	DY-3	L-8	R321	C-17	R545	K-18	TP9	F-15
A-29	D-18	C518	E-20	IC201	B-6	R323	D-17	R546	K-14	TP12	A-10
A-30	R-21	C519	D-20	IC301	C-15	R324	B-17	R547	S-13	TP92	N-13
C201	B-5	C520	A-16	IC302	G-11	R327	A-15	R548	S-14	TP93	I-13
C202	B-7	C521	A-18	IC501	D-21	R329	H-14	R549	R-16	TP95	N-22
C203	B-8	C522	A-21	IC502	B-23	R330	Q-13	R550	M-14	TP96	Q-13
C204	C-8	C523	B-23	J201	B-2	R332	G-17	R551	L-14	X301	E-19
C205	C-7	C524	A-23	L201	E-8	R333	H-16	R552	M-15		
C206	G-8	C525	C-25	L202	B-8	R334	D-10	R553	N-15		
C207	D-7	C526	B-25	L203	C-8	R335	E-9	R554	Q-15		
C208	D-5	C527	F-25	L204	F-6	R336	B-14	R555	Q-19		
C209	D-4	C528	F-26	L301	B-16	R401	Q-9	R556	Q-15		
C210	D-5	C529	E-26	L302	D-17	R402	F-10	R557	S-24		
C211	D-5	C530	M-21	L303	F-13	R403	F-11	R561	R-15		
C212	F-3	C531	M-21	L304	B-15	R404	I-14	R562	R-12		
C213	C-5	C532	R-21	L401	I-11	R405	G-13	R563	A-16		
C214	F-4	C533	N-23	L501	S-21	R406	F-12	R565	A-20		
C215	E-7	C534	Q-21	L502	S-22	R408	E-11	R566	A-21		
C216	E-3	C535	J-13	L503	N-24	R409	H-13	R568	E-24		
C219	E-3	C536	K-18	L504	H-26	R410	H-11	R570	H-24		
C220	B-4	C537	K-17	L505	L-16	R411	H-9	R571	I-18		
C221	G-6	C538	L-13	L506	Q-17	R412	H-10	R572	R-11		
C223	E-4	C539	S-15	L507	M-18	R413	H-11	R573	B-19		
C250	H-17	C540	R-20	L508	G-19	R414	I-9	R574	B-18		
C251	N-11	C541	R-19	Q250	N-11	R415	H-13	R576	I-23		
C303	C-13	C543	L-14	Q301	C-17	R416	I-12	R577	P-14		
C304	C-13	C544	Q-21	Q401	I-12	R417	G-11	R578	Q-15		
C306	C-14	C545	S-22	Q402	B-13	R418	G-11	R579	A-15		
C307	C-14	C546	P-13	Q501	F-25	R419	A-11	R580	C-20		
C308	D-13	C547	Q-13	Q502	K-24	R420	B-13	R581	C-20		
C309	B-15	C548	H-25	Q503	K-14	R430	E-11	R582	F-19		
C311	C-16	C549	E-21	Q504	R-14	R501	H-22	R583	E-26		
C313	Q-17	C550	E-21	Q505	S-12	R502	G-23	R585	R-21		
C315	B-14	C551	S-13	Q506	S-12	R503	F-22	R586	A-17		
C316	C-14	C553	A-19	Q507	E-19	R504	E-22	R587	C-18		
C317	E-14	C554	F-20	Q801	Q-10	R505	E-23	R589	D-18		
C318	F-13	C555	F-20	R200	C-3	R506	D-22	R590	E-24		
C319	F-14	C556	F-20	R201	B-5	R507	D-24	R599	B-20		
C320	G-13	C558	D-22	R202	A-7	R508	F-25	R801	Q-12		
C324	E-14	C559	F-21	R203	B-8	R509	C-22	R802	P-11		
C326	F-18	C561	S-12	R204	B-8	R510	G-19	R803	Q-10		
C327	B-16	C562	A-17	R206	G-7	R511	H-18	R804	P-12		
C328	D-14	C563	B-22	R207	C-8	R512	J-16	R805	Q-10		
C330	H-15	C565	A-17	R209	F-8	R513	G-20	R806	N-10		
C401	H-9	C566	L-22	R213	C-3	R514	G-20	R807	N-9		
C402	E-10	C568	E-22	R214	C-3	R515	H-19	RV201	G-2		
C403	E-10	C569	A-23	R215	B-4	R516	H-20	RV202	H-2		
C404	H-12	C570	E-24	R216	C-4	R517	H-19	RV301	F-10		
C405	I-13	C571	H-18	R218	F-3	R518	I-20	RV302	G-17		
C406	H-13	C801	Q-9	R219	E-3	R519	A-21	RV303	E-17		
C407	E-12	C802	Q-9	R220	D-5	R520	A-22	RV304	F-17		
C408	D-12	CF201	B-8	R222	D-3	R521	B-20	RV501	G-23		
C409	I-10	CF202	F-8	R225	H-6	R522	E-20	RV502	I-17		
C411	H-12	CV301	E-13	R226	D-8	R523	B-22	RV503	K-15		
C413	H-11	D201	F-1	R227	C-2	R524	E-19	RV504	K-19		
C414	E-11	D202	D-1	R228	G-4	R525	D-19	CF201	B-3		
		D250	N-11	R230	G-3	R526	F-20	SG501	Q-19		
		D301	B-15	R250	N-12	R527	J-11	T201	B-5		

A BOARD

SONY MODEL
KV-2648R (CH,SCC-338E-A)

H BOARD GridTrace
LOCATION GUIDE

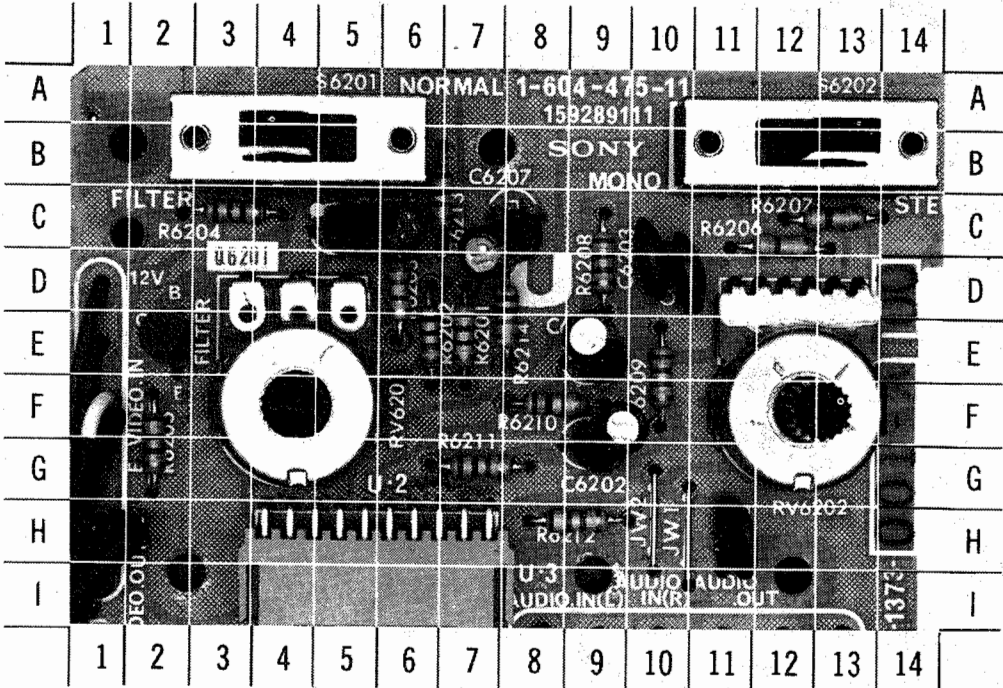
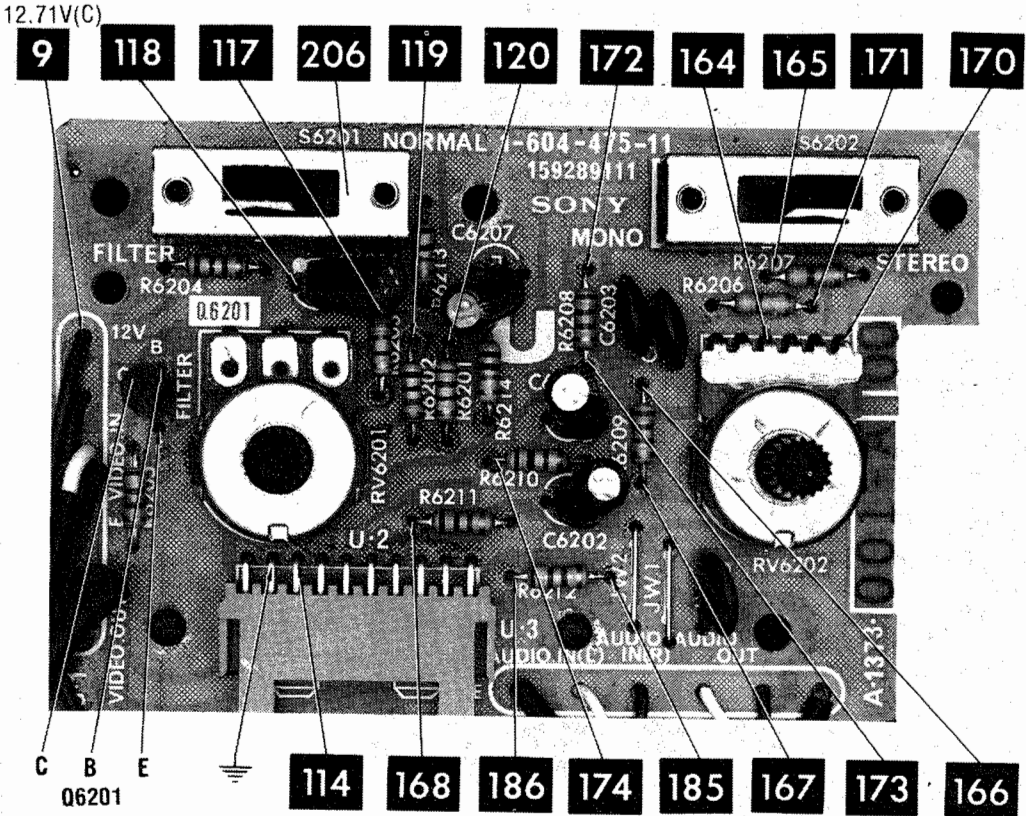
R3305	A-7
RV3301	B-7
RV3302	B-5
RV3303	B-13
RV3304	B-12
RV3305	B-15
S3309	B-9
S3313	A-10



H BOARD A Howard W. Sams CIRCUITRACE® Photo

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U BOARD

U BOARD GridTrace LOCATION GUIDE

C6201	E-9	C6207	C-7	R6205	G-2	R6211	G-7	RV6202B	F-12
C6202	F-9	Q6201	E-2	R6206	C-12	R6212	H-9	S6201	B-4
C6203	D-10	R6201	E-7	R6207	C-13	R6213	C-6	S6202	B-12
C6204	D-10	R6202	E-6	R6208	D-9	R6214	E-8	U-2	H-7
C6205	H-11	R6203	D-6	R6209	E-10	RV6291	F-4		
C6206	C-5	R6204	C-3	R6210	F-8	RV6202A	F-12		



SEMICONDUCTORS (Select replacement transistor for best results) (cont)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA							ZENITH PART No.	MOTOROLA PART No.
			GENERAL ELECTRIC PART No.	TCG PART No.	RCA PART No.	EGG PART No.	THORDARSON PART No.	WORKMAN PART No.			
D602	U05G U05E RD10EN1 S1B01-02 10E2	8-719-911-55 8-719-102-89 8-719-200-01	GE-512 GE-512 GEZD-10 GE-504A GE-504A	TCG156 TCG156 TCG5019A TCG116 TCG116	SK3051/156 SK3051/156 SK3785/5019A SK3311 SK3311	EGG156 EGG156 EGG5019A EGG116 EGG116	TM156 TM156 TM5019A TM116 TM116	WEP4008/156 WEP4008/156 WEP1420/5019 WEP156 WEP156	212-Z9000 212-Z9000 103-Z9010 212-76-02 212-76-02	1N4725 1N4725 1N52408 1N4003 1N4003	
D607	V09E V09G	8-719-900-95	GE-511 GE-511	TCG552 TCG552	SK9000/552 SK9000/552	EGG552 EGG552	TM552 TM552	WEP152/552 WEP152/552	103-287 103-287	MR1-1400 MR1-1400	
D608	EQ801-24RR RD24F-BS V19E	8-719-124-08	GEZD-24 GEZD-24 GE-511	TCG5081A TCG5081A TCG552	SK3151/5081A SK3151/5081A SK9000/552	EGG5081A EGG5081A EGG552	TM5081A TM5081A TM552	WEP164/5081 WEP164/5081 WEP152/552	103-Z9000 103-Z9000 103-287	1N4749A 1N4749A MR1-1400	
D609	GH-3F	8-719-305-15	GE-530	TCG551	SK3925/525	EGG551	TM551	WEP177/525	103-Z9010		
D610	V19C GH-3F	8-719-305-15	GE-511 GE-530	TCG552 TCG551	SK9000/552 SK3925/525	EGG552 EGG551	TM552 TM551	WEP152/552 WEP177/525	103-287 103-Z9010	MR1-1400	
D611	V19E GH-3F	8-719-305-15	GE-511 GE-530	TCG552 TCG551	SK9000/552 SK3925/525	EGG552 EGG551	TM552 TM551	WEP152/552 WEP177/525	103-287 103-Z9010	MR1-1400	
D612	V19C GH-3F	8-719-305-15	GE-511 GE-530	TCG552 TCG551	SK9000/552 SK3925/525	EGG552 EGG551	TM552 TM551	WEP152/552 WEP177/525	103-287 103-Z9010	MR1-1400	
D615											
D616	S1B01-02 10E2	8-719-200-02	GE-504A GE-504A	TCG116 TCG116	SK3311 SK3311	EGG116 EGG116	TM116 TM116	WEP156 WEP156	212-76-02 212-76-02	1N4003 1N4003	
D618											
D650	RM1Z V06C V09C	8-719-900-93	GE-504A GE-504A GE-511	TCG116 TCG116 TCG552	SK3311 SK3312 SK9000/552	EGG116 EGG116 EGG552	TM116 TM116 TM552	WEP156 WEP157 WEP152/552	212-76-02 212-76-02 103-287	1N4003 1N4004 MR1-1400	
D654											
D655	RD13E-B3Z RD13EN2	8-719-103-06	GEZD-13 GEZD-13	TCG5022A TCG5022A	SK3788/5022A SK3788/5022A	EGG5022A EGG5022A	TM5022A TM5022A	WEP1424/5022 WEP1424/5022	103-96 103-96	1N5243B 1N5243B	
D701	1S119	8-719-911-19	GE-514	TCG519	SK3100/519	EGG519	TM519	WEP925/519	103-131	1N4935	
D703	1S1555		GE-300	TCG177	SK9091/177	EGG177	TM177	WEP1062/177	103-131	1N4935	

PARTS LIST AND DESCRIPTION (CONTINUED)

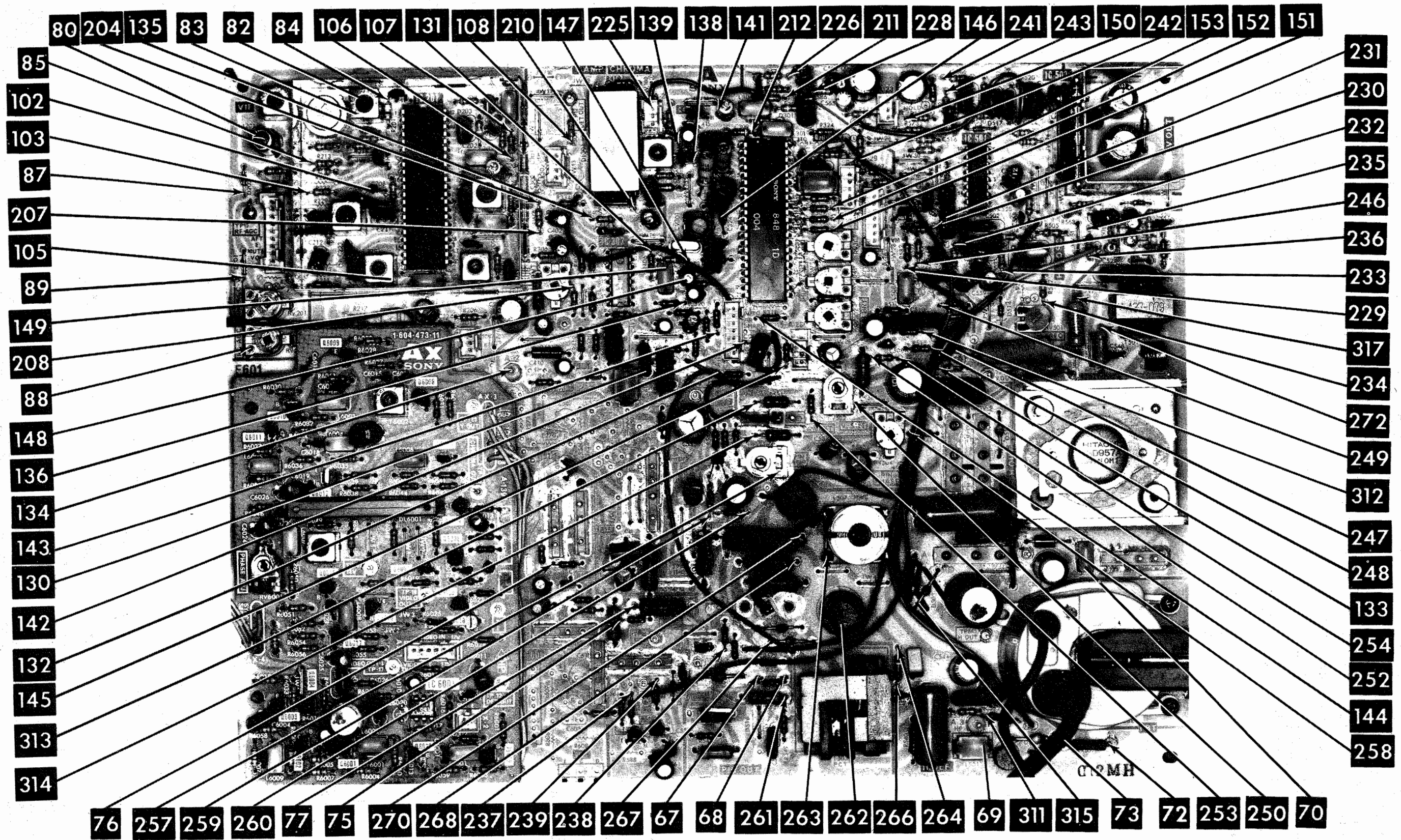
(When ordering parts, state Model, Part Number, and Description.)

Replacement parts shown may be superseded by the availability of newly introduced replacements.

Have your local distributor check Sams COUNTER FACTS[®] for the most up-to-date replacement.

SEMICONDUCTORS (Select replacement transistor for best results) (cont)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA							MOTOROLA PART No.
			GENERAL ELECTRIC PART No.	TCG PART No.	RCA PART No.	EGG PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.	
D704	RD33E-B2 RD33E-BZZ	8-719-101-04	GEZD-33 GEZD-33	TCG5036A TCG5036A	SK3802/5036A SK3802/5036A	EG5036A EG5036A	TM5036A TM5036A	WEP1438/5036 WEP1438/5036	103-Z9004 103-Z9004	IN5257B IN5257B
D705	1S5119 1S5119	8-719-911-19	GE-514 GE-514	TCG519 TCG177	SK3100/519 SK9091/177	EG519 EG177	TM519 TM177	WEP925/519 WEP1062/177	103-131 103-131	IN4935 IN4935
D706	1S1555 1S1555	8-719-911-19	GE-300 GE-514	TCG519 TCG177	SK3100/519 SK9091/177	EG519 EG177	TM519 TM177	WEP925/519 WEP1062/177	103-131 103-131	IN4935 IN4935
IC201	CX-885	8-758-850-00								
IC301	CX-848	8-758-480-00								
IC302	CX-841	8-759-908-41								
IC501	LA7802	8-759-878-03								
IC502	UPC1368H2	8-759-103-68			SK9199					
IC601	DM-7	1-235-058-00								
IC5001	CX-875A	8-759-918-75								
IC5002	CX-874	8-758-740-00								
IC5003	CX-766	8-757-660-00								
IC5004	UPC1188H	8-759-111-88								
IC5005	UPC1188H	8-759-111-88								
IC6001	CX-130	8-751-300-00								
Q1	25A1048Y 25A1175	8-729-117-54	GE-269 GE-82*	TCG290A TCG159*	SK3114/290 SK3117/235	EG290A EG159*	TM290 TM159*	WEP911/290 WEP62/159*	905-124 921-1313	2N4403* 2N5401*
Q250	25C1419C 25C1061	8-729-316-16	GE-66A GE-66A	TCG152 TCG152	SK3893/152	EG152 EG152	TM152	WEP745/152 WEP745/152	921-1311 121-987-03	T1P41A T1P41A
Q301	25C945K 25C2785	8-729-178-54	GE-212 GE-89+	TCG85 TCG85	SK3124/289 SK9229/85	EG85 EG85	TM289 TM289	WEP1945 WEP910/289	121-972* 921-1325	MP5A18* 2N4401*
Q401	25A1175H 25A733	8-729-117-54	GE-82* GE-48	TCG159* TCG290A	SK3114/290 SK3114/290	EG159* EG290A	TM159* TM290	WEP62/159* WEP62/159*	921-1311 121-Z9067	2N5401* 2N4403*
Q402	25C945K 25C1364	8-729-178-54	GE-212 GE-210	TCG85 TCG289A	SK3124/289 SK3124/289	EG85 EG85	TM289 TM123AP*	WEP1945 WEP634	121-972* 121-Z9000A*	MP5A18* MP5A05*
	25C2785	8-729-178-54	GE-89+	TCG85	SK9229/85	EG85	TM289	WEP910/289	921-1325	2N4401*
Q501	25C2230AY	8-729-213-11	GE-222*	TCG399	SK3866	EG399	TM287*	WEP68/287*	121-Z9045*	MP5A42*
Q502	25D957A	8-729-395-70		TCG89	SK9119/89	EG89				
Q503	25A1175E 25A733	8-729-117-54	GE-82* GE-48	TCG159* TCG290A	SK3114/290 SK3114/290	EG159* EG290A	TM159* TM290	WEP62/159* WEP62/159*	921-1311 121-Z9067	2N54601* 2N4403*



Ref.No	Part No	Description
	MH	
♣:A-1306-127-A MH BOARD, COMPLETE		
CP001	1-231-683-00	COMPOSITION CIRCUIT BLOCK 22KX5
CP002	1-231-683-00	COMPOSITION CIRCUIT BLOCK 22KX5
CP003	1-231-570-00	COMPOSITION CIRCUIT BLOCK 220KX7
CP004	1-231-425-00	CAPACITOR BLOCK 220PX6
CP005	1-231-569-00	COMPOSITION CIRCUIT BLOCK 22KX4
CP006	1-231-682-00	COMPOSITION CIRCUIT BLOCK 220PX4
IC001	8-759-153-86	IC UPD553C086
IC002	8-757-611-00	IC CX-761A
IC003	8-759-291-26	IC TC91258P
IC004	8-759-133-90	IC UPC339C
IC005	8-759-240-01	IC TC4001BP
L001	1-407-179-00	MICRO INDUCTOR 1.2UH
L002	1-407-179-00	MICRO INDUCTOR 1.2UH
L003	1-407-179-00	MICRO INDUCTOR 1.2UH
L004	1-407-169-XX	MICRO INDUCTOR 100UH
L005	1-420-945-00	COIL, AIR-CORE 70MMH
L006	1-407-179-00	MICRO INDUCTOR 1.2UH
L008	1-407-364-00	COIL, SPOOK CHOKE 3.3UH
X001	1-527-590-00	VIBRATOR, CRYSTAL
X002	1-527-532-00	OSCILLATOR, CERAMIC

	MJ	
♣:1-604-477-00 MJ BOARD		
S3201	1-553-685-00	SWITCH, PUSH
S3202	1-553-685-00	SWITCH, PUSH
S3203	1-553-685-00	SWITCH, PUSH
S3204	1-553-685-00	SWITCH, PUSH
S3205	1-553-685-00	SWITCH, PUSH
S3206	1-553-685-00	SWITCH, PUSH
S3207	1-553-685-00	SWITCH, PUSH
S3208	1-553-685-00	SWITCH, PUSH

	Mk	
♣:1-604-478-00 MK BOARD		
D3001	8-719-909-19	DIODE GL-9NG9
D3002	8-719-909-19	DIODE GL-9NG9
D3003	8-719-909-19	DIODE GL-9NG9

	Mz	
♣:A-1306-126-A MZ BOARD, COMPLETE		
CP4001	1-231-682-00	COMPOSITION CIRCUIT BLOCK 220PX4
CP4002	1-231-619-00	COMPOSITION CIRCUIT BLOCK 22KX4
CP4003	1-231-683-00	COMPOSITION CIRCUIT BLOCK 22KX5
CP4004	1-231-682-00	COMPOSITION CIRCUIT BLOCK 220PX4
CP4005	1-231-659-00	COMPOSITION CIRCUIT BLOCK 20KX7
CP4006	1-231-569-00	COMPOSITION CIRCUIT BLOCK 22KX4
IC4001	8-759-147-66	IC UPD547C066
IC4002	8-759-245-14	IC TC45148P
IC4003	8-759-937-02	IC TMS3701JNS
IC4004	8-759-937-01	IC TMS3701BNS
IC4005	8-759-240-11	IC TC4011BP
IC4006	8-759-240-11	IC TC4011BP
IC4007	8-759-140-81	IC UPD4081C
IC4008	8-759-240-11	IC TC4011BP
IC4009	8-759-240-72	IC TC4072BP
IC4010	8-759-240-13	IC TC4013BP
IC4011	8-759-240-13	IC TC4013BP
IC4012	8-759-240-69	IC TC4069UBP
IC4013	8-759-240-01	IC TC4001BP
IC4014	8-759-240-01	IC TC4001BP
IC4015	8-759-240-40	IC TC4040BP
IC4016	8-759-240-11	IC TC4011BP
IC4017	8-759-140-81	IC UPD4081C
L4001	1-407-687-00	MICRO INDUCTOR 3.3UH
RV4001	1-226-852-00	RES, ADJ, CARBON 22K
RV4002	1-226-852-00	RES, ADJ, CARBON 22K
RV4003	1-226-819-00	RES, ADJ, CARBON 1K
RV4004	1-226-819-00	RES, ADJ, CARBON 1K
RV4005	1-226-851-00	RES, ADJ, CARBON 10K
RV4006	1-226-853-00	RES, ADJ, CARBON 47K

Ref.No	Part No	Description
	N	
TH4001	1-800-944-00	THERMISTOR TH-4700
X4001	1-527-532-00	OSCILLATOR, CERAMIC
1-603-976-00 N BOARD		
D1	8-719-110-32	DIODE PH3U2B
IB1	1-232-004-00	COMPOSITION CIRCUIT BLOCK
IC1	8-759-113-73	IC UPC1373H
L1	1-404-310-00	COIL

	S	
♣:1-604-506-00 S BOARD		
C1001	1-123-330-00	ELECT 22MF 20% 25V
C1002	1-123-329-00	ELECT 10MF 20% 25V
C1003	1-123-329-00	ELECT 10MF 20% 25V
C1004	1-123-329-00	ELECT 10MF 20% 25V
C1005	1-108-389-00	MYLAR 0.1MF 10% 100V
C1006	1-108-377-00	MYLAR 0.01MF 10% 100V
R1001	1-246-461-00	CARBON 330 5% 1/4W

	SA	
♣:1-604-479-00 SA BOARD		
C1007	1-123-318-00	ELECT 33MF 20% 16V
C1008	1-101-004-00	CERAMIC 0.01MF 50V
L1001	1-407-364-00	COIL, SPOOK CHOKE 3.3UH

	TA	
♣:1-604-480-00 TA BOARD		
C3101	1-102-820-00	CERAMIC 330PF 5% 50V
C3102	1-102-820-00	CERAMIC 330PF 5% 50V
C3103	1-102-820-00	CERAMIC 330PF 5% 50V
L3101	1-407-161-XX	MICRO INDUCTOR 22UH
ND3101	1-519-173-00	INDICATOR TUBE (GREEN) FIP 2A13

Items marked "♣" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

=>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, and Description.)
Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFGR. PART No.	REPLACEMENT DATA							MOTOROLA PART No.
			GENERAL ELECTRIC PART No.	TCG PART No.	RCA PART No.	ECG PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.	
D201	1S119 1S155	8-719-911-19	GE-514 GE-300	TCG519 TCG177	SK3100/519 SK9091/177	ECG519 ECG177	TM519 TM177	WEP925/519 WEP1062/177	103-131 103-131	1N4935 1N4935
D202	1S119 1S155	8-719-911-19	GE-514 GE-300	TCG519 TCG177	SK3100/519 SK9091/177	ECG519 ECG177	TM519 TM177	WEP925/519 WEP1062/177	103-131 103-131	1N4935 1N4935
D250	RD13EN2 RD13E-BZ2	8-719-103-06	GEZD-13 GEZD-13	TCG5022A TCG5022A	SK3788/5022A SK3788/5022A	ECG5022A ECG5022A	TM5022A TM5022A	WEP1424/5022 WEP1424/5022	103-96 103-96	1N5243B 1N5243B
D301	1S119 1S155	8-719-911-19	GE-514 GE-300	TCG519 TCG177	SK3100/519 SK9091/177	ECG519 ECG177	TM519 TM177	WEP925/519 WEP1062/177	103-131 103-131	1N4935 1N4935
D501	RD5.6E-BZ2 RD5.6E-BZ7S	8-719-156-25	GEZD-5.6 GEZD-5.6	TCG5011A TCG5011A	SK3777/5011A SK3777/5011A	ECG5011A ECG5011A	TM5011A TM5011A	WEP1412/5011 WEP1412/5011	103-Z9007 103-Z9007	1N5232B 1N5232B
D502	GP08D U05G	8-719-911-55	GE-504A GE-512	TCG116 TCG156	SK3311 SK3051/156	ECG116 ECG156	TM116 TM156	WEP156 WEP4008/156	212-76-02 212-Z9000	1N4003 1N4725
D503	V11N	8-719-901-19	GE-533	TCG525	SK3925/525	ECG525	TM525	WEP177/525	212-Z9010	MR1-1400
D504	RH1A	8-719-300-76	GE-511	TCG552	SK9000/552	ECG552	TM552	WEP152/552	103-287	1N4005
D505	GH-3F	8-719-305-15	GE-530	TCG551	SK3925/525	ECG551	TM551	WEP177/525	212-76-02	1N4005
D506	GU-3A	8-719-300-38	GE-504A	TCG116	SK3313/116	ECG116	TM116	WEP158/116	212-76-02	1N4005
D508	V19C	8-719-305-15	GE-511	TCG552	SK9000/552	ECG552	TM552	WEP152/552	103-287	MR1-1400
D509	GH-3F V09C	8-719-900-93	GE-530 GE-511	TCG551 TCG552	SK9000/552	ECG551 ECG552	TM551 TM552	WEP177/525 WEP152/552	103-Z9010 103-287	MR1-1400
D510	V06C RD24E-BZ7	8-719-190-00	GE-504A GEZD-24	TCG116 TCG5031A	SK3312 SK3797/5031A	ECG116 ECG5031A	TM116 TM5031A	WEP157 WEP1433/5031	212-76-02 103-212	1N4004 1N5252B
D512	V30N	8-719-903-09	GE-511	TCG506	SK3998/506	ECG506	TM506	WEP172/506	103-287	MR1-1400
D513	1S119 1S155	8-719-911-19	GE-514 GE-300	TCG519 TCG177	SK3100/519 SK9091/177	ECG519 ECG177	TM519 TM177	WEP925/519 WEP1062/177	103-131 103-131	1N4935 1N4935
D514	RD15EN3 RD15E-B3Z	8-719-103-11	GEZD-15 GEZD-15	TCG5024A TCG5024A	SK3790/5024A SK3790/5024A	ECG5024A ECG5024A	TM5024A TM5024A	WEP1426/5024 WEP1426/5024	103-Z9013 103-Z9013	1N5245B 1N5245B
D515	1S119 1S155	8-719-911-19	GE-514 GE-300	TCG519 TCG177	SK3100/519 SK9091/177	ECG519 ECG177	TM519 TM177	WEP925/519 WEP1062/177	103-131 103-131	1N4935 1N4935
D517	1S119 1S155	8-719-911-19	GE-514 GE-300	TCG519 TCG177	SK3100/519 SK9091/177	ECG519 ECG177	TM519 TM177	WEP925/519 WEP1062/177	103-131 103-131	1N4935 1N4935
D601	U05G U05E	8-719-911-55	GE-512 GE-512	TCG156 TCG156	SK3051/156 SK3051/156	ECG156 ECG156	TM156 TM156	WEP4008/156 WEP4008/156	212-Z9000 212-Z9000	1N4725 1N4725

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

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ELECTROLYTIC CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA		NOTES
			SPRAGUE PART No.		
			Q-LINE	GENERAL LINE	
C1	10 16V 20%	1-123-316-00	QCP-4148-01	TVAN-1304.1	
C203	.1 50V 20%	1-123-586-00			
C204	.22 50V 20%	1-123-447-00			
C206	470 16V 20%	1-123-323-00			
C212	1 50V 20%	1-123-380-00			
C214	10 16V 20%	1-123-356-00			
C216	1 50V 20%	1-123-380-00			
C221	47 16V 20%	1-123-332-00			
C250	47 16V 20%	1-123-332-00			
C251	47 16V 20%	1-123-332-00			
C306	.22 50V 20%	1-123-447-00			
C315	.33 50V 20%	1-123-286-00			
C316	.22 50V 20%	1-123-447-00			
C318	.47 50V 20%	1-123-379-00			
C319	10 16V NP	1-121-806-00			
C320	.47 50V 20%	1-123-379-00			
C326	33 16V 20%	1-123-318-00			
C327	47 16V 20%	1-123-332-00			
C328	100 16V 20%	1-123-333-00			
C330	1 50V 20%	1-123-352-00			
C401	1 50V 20%	1-123-380-00			
C402	33 16V 20%	1-123-318-00			
C403	1 50V 20%	1-123-380-00			
C404	10 50V 20%	1-123-356-00			
C406	2.2 50V 20%	1-123-381-00			
C407	10 16V 20%	1-123-356-00			
C408	1 50V 20%	1-123-380-00			
C409	1 50V 20%	1-123-380-00			
C415	22 16V 20%	1-123-330-00			
C500	1 50V 20%	1-123-380-00			
C501	22 25V 20%	1-123-330-00			
C506	10 25V 20%	1-123-329-00			
C507	.47 50V 20%	1-123-379-00			
C508	1 25V 10%	1-131-236-00			
C509	560 25V 10%	1-123-587-00			
C511	2.2 20V 10%	1-131-196-00			
C512	.33 50V 20%	1-123-286-00			
C516	2.2 20V 10%	1-131-196-00			
C517	1 50V 20%	1-123-380-00			
C520	1 50V 20%	1-123-380-00			
C521	470 16V 20%	1-123-323-00			
C525	330 50V 20%	1-123-362-00			
C526	100 50V 20%	1-123-360-00			
C533	10 160V	1-121-999-00			
C534	33 160V	1-121-757-00			
C535	330 50V 20%	1-123-362-00			
C536	33 50V 20%	1-123-358-00			
C537	10 50V 20%	1-123-356-00			
C538	22 50V 20%	1-123-357-00			
C543	4.7 250V	1-121-759-00			
C544	330 25V 20%	1-123-335-00			
C551	4.7 35V 20%	1-131-351-00			
C553	220 16V 20%	1-123-321-00			
C558	10 16V 20%	1-123-356-00			
C559	1 50V 20%	1-123-380-00			
C561	22 50V 20%	1-123-357-00			
C562	4.7 25V 20%	1-123-328-00			
C565	.1 50V 20%	1-123-586-00			
C570	10 50V 20%	1-123-356-00			
C571	100 16V 20%	1-123-333-00			
# C605	470 200V	1-125-260-00			
# C606	470 200V	1-125-260-00			
C610	1 160V	1-123-252-00			
C616	47 50V 20%	1-123-359-00			
C617	100 50V 20%	1-123-360-00			
C622	470 25V 20%	1-123-336-00			
C623	4700 35V	1-125-193-00			
				TVA-1504*	
				SD35-4R79	
				TVA-1540*	
				TVA-1318.7	

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

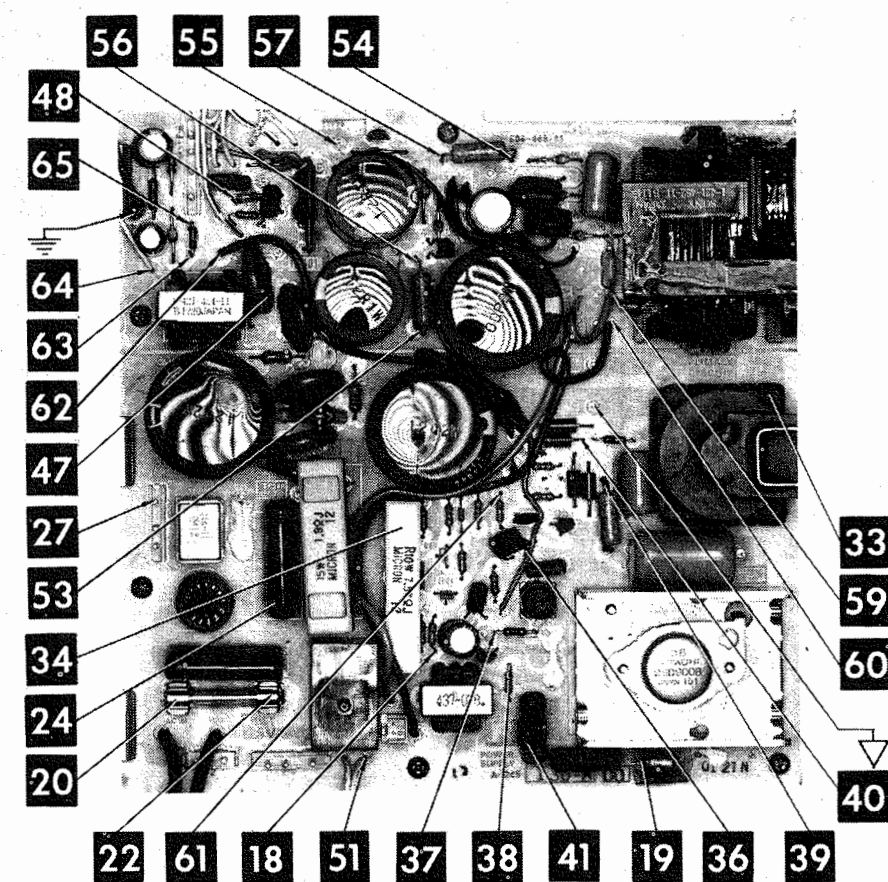
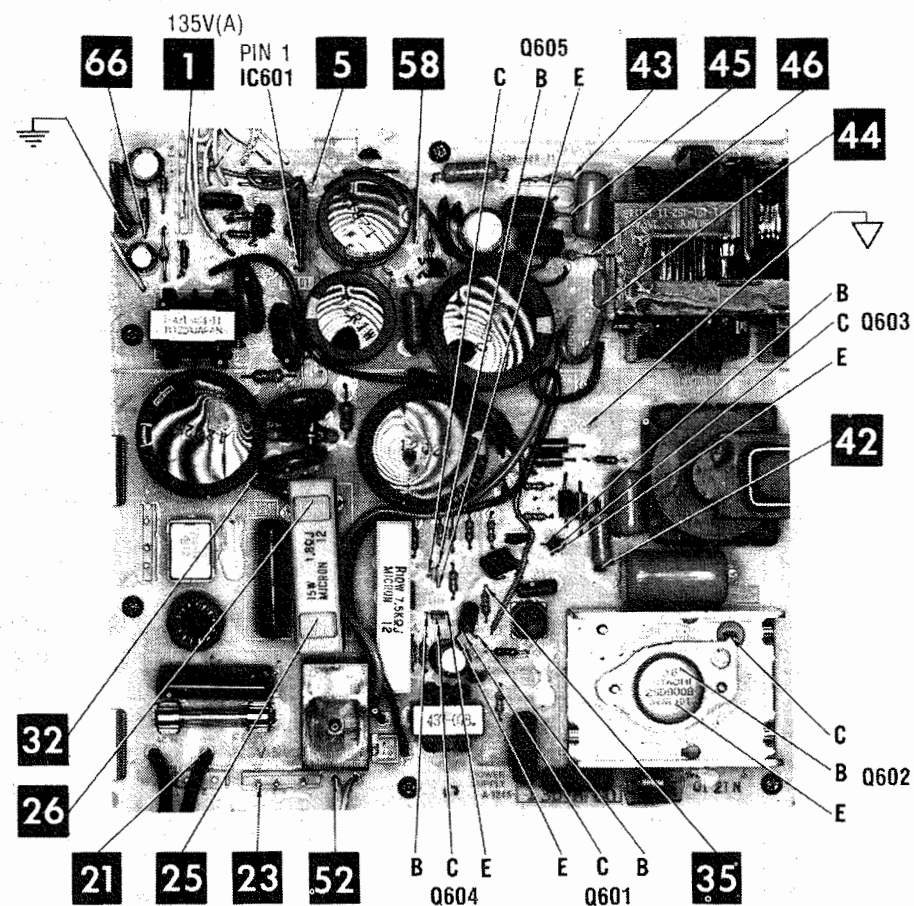
Replacement parts shown may be superseded by the availability of newly introduced replacements.
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ELECTROLYTIC CAPACITORS (cont)

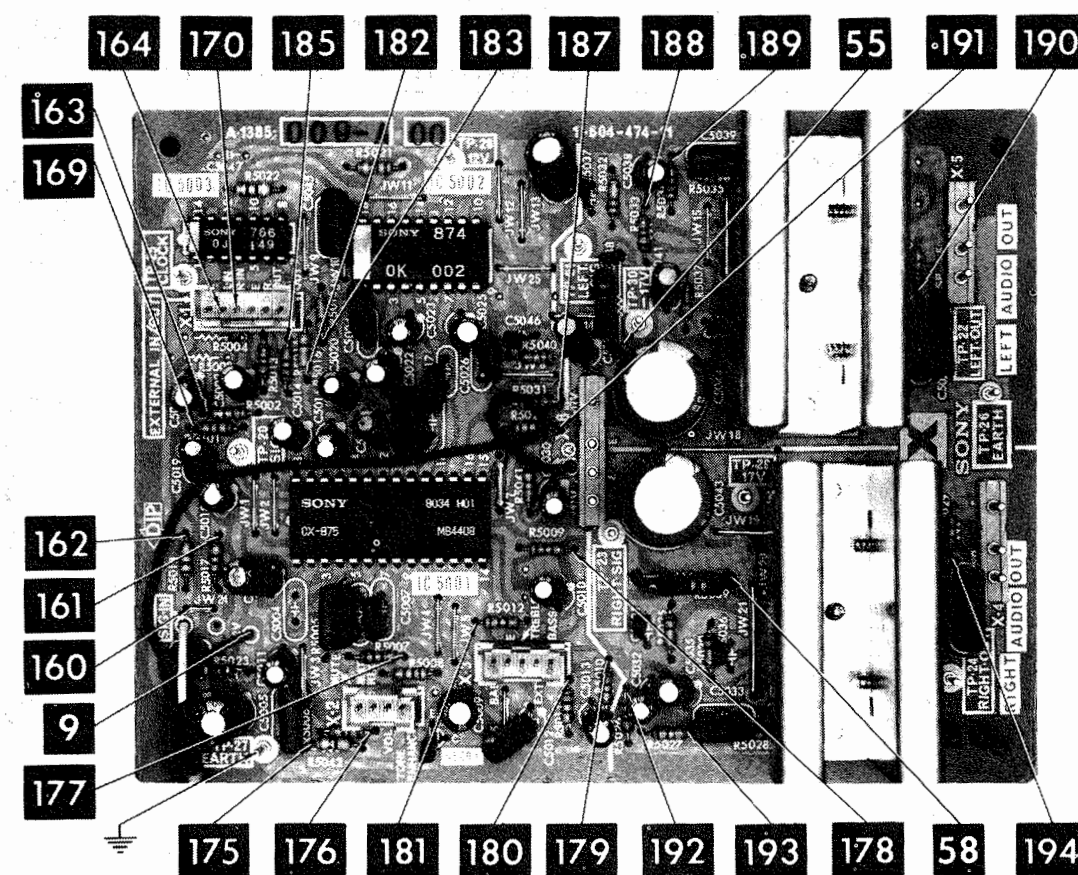
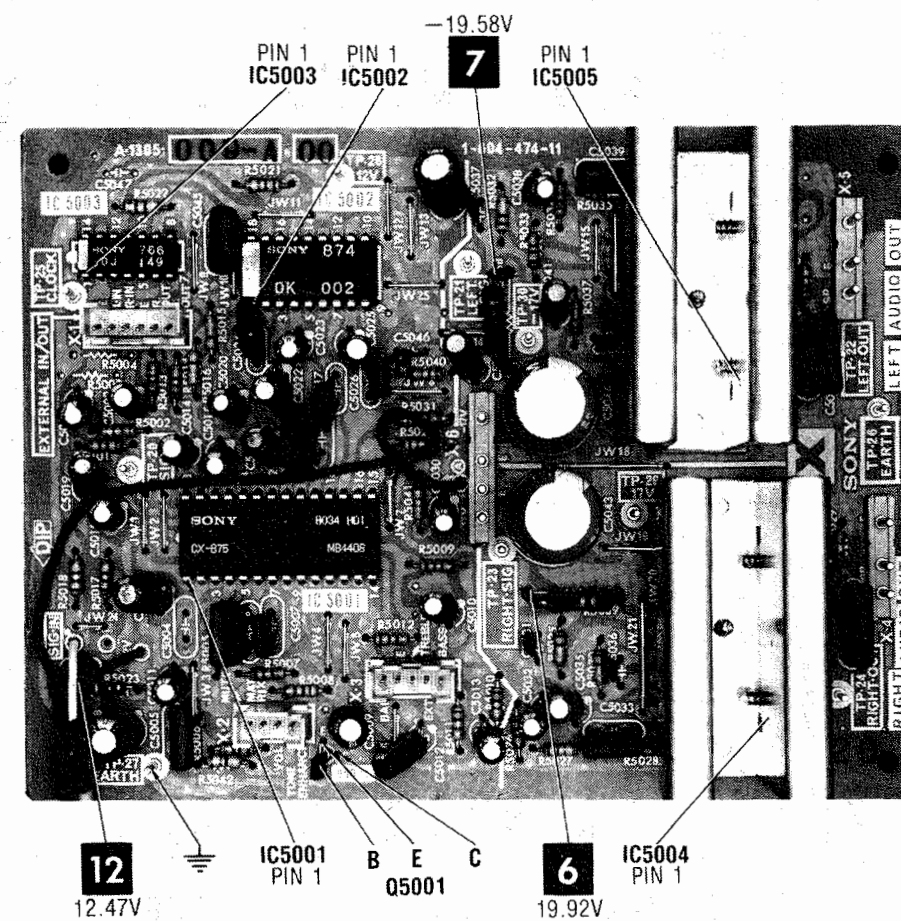
ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA		NOTES
			SPRAGUE PART No.		
			Q-LINE	GENERAL LINE	
C624	4700 35V	1-125-193-00	QCP-3107-01 QCP-3107-01	TVA-1318.7	
C625	560 180V	1-125-213-00		EV-1615	
C655	470 25V 20%	1-123-336-00		EV-1615	
C656	1 50V 20%	1-123-380-00			
C657	2.2 50V 20%	1-123-381-00			
C702	10 16V 20%	1-123-356-00			
C712	1 50V	1-121-391-00			
C713	1 50V	1-121-391-00			
C718	10 50V 20%	1-123-356-00			
C801	1 50V 20%	1-123-380-00			
C802	1 50V 20%	1-123-380-00			
C901	3.3 50V NP	1-119-438-00			
C902	3.3 50V NP	1-119-438-00			
C5001	4.7 25V 20%	1-123-328-00			
C5002	4.7 25V 20%	1-123-328-00			
C5003	47 16V 20%	1-123-332-00			
C5009	47 16V 20%	1-123-332-00			
	1 50V 20%	1-123-380-00			
C5010	1 50V 20%	1-123-380-00			
C5011	1 50V 20%	1-123-380-00			
C5012	1 50V 20%	1-123-380-00			
C5013	1 50V 20%	1-123-380-00			
C5014	4.7 25V 20%	1-123-328-00			
C5015	4.7 25V 20%	1-123-328-00			
C5018	4.7 25V 20%	1-123-328-00			
C5019	4.7 25V 20%	1-123-328-00			
C5020	4.7 25V 20%	1-123-328-00			
C5021	4.7 25V 20%	1-123-328-00			
C5022	4.7 25V 20%	1-123-328-00			
C5023	4.7 25V 20%	1-123-328-00			
C5025	.47 50V 20%	1-123-379-00			
C5027	100 16V 20%	1-123-333-00			
C5028	100 16V 20%	1-123-333-00			
C5029	22 25V 20%	1-123-330-00			
C5030	22 25V 20%	1-123-330-00			
C5032	22 25V 20%	1-123-330-00			
C5035	33 16V 20%	1-123-318-00			
C5038	22 25V 20%	1-123-330-00			
C5041	33 16V 20%	1-123-318-00			
C5043	1000 25V 20%	1-123-337-00			
C5044	1000 25V 20%	1-123-337-00			
C6004	33 16V 20%	1-123-318-00			
C6006	10 16V 20%	1-123-356-00			
C6008	10 16V 20%	1-123-356-00			
C6009	1000 16V 20%	1-123-324-00			
C6010	10 16V 20%	1-123-356-00			
C6011	10 16V 20%	1-123-356-00			
C6013	10 16V 20%	1-123-356-00			
C6021	100 16V 20%	1-123-333-00			
C6024	1 50V 20%	1-123-380-00			
C6025	10 16V 20%	1-123-356-00			
C6026	1 50V 20%	1-123-380-00			
C6201	10 25V 20%	1-123-329-00			
C6202	10 25V 20%	1-123-329-00			
C6206	33 16V 20%	1-123-318-00			
C6207	10 25V 20%	1-123-329-00			
C6301	2.2 25V NP	1-121-705-00			
C6302	2.2 25V NP	1-121-705-00			
				TVAN-1302.1 TVAN-1302.1	

For SAFETY use only equivalent replacement part.
* Axial replacement for radial device.

SONY MODEL
KV-2648R (CH,SCC-338E-A)



F BOARD A Howard W. Sams CIRCUITRACE® Photo



X BOARD A Howard W. Sams CIRCUITRACE® Photo

SONY MODEL
KV-2648R (CH.SCC-338E-A)

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)
Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

SEMICONDUCTORS (Select replacement transistor for best results) (cont)

REPLACEMENT DATA								
ITEM No.	TYPE No.	MFGR. PART No.	GENERAL ELECTRIC PART No.	TCG PART No.	RCA PART No.	ECG PART No.	THORDARSON PART No.	WORKMAN PART No.
Q504 Q505 Q506 Q507	2SD795A	8-729-109-53	GE-66A	TCG152	SK3893/152	ECG152	TM152	WEP745/152
	2SC1890AE	8-729-309-06	GE-220*	TCG90	SK3931/90	ECG90	TM194*	WEP64/194*
	2SC1364	8-729-663-47	GE-210	TCG289A	SK3124/289	ECG85	TM123AP*	WEP634
	2SA1175H	8-729-117-54	GE-82*	TCG159*	SK3114/290	ECG159*	TM159*	WEP62/159*
	2SA733		GE-48	TCG290A	SK3114/290	ECG290A	TM290	WEP62/159*
Q601 Q602	2SC2230AGRY	8-729-213-11	GE-222*	TCG399	SK3866	ECG399	TM287*	WEP68/287*
	2SD900B			TCG89	SK9119/89	ECG89		
	2SD900B-06	8-729-390-06		TCG89	SK9119/89	ECG89		
	2SC1890AE	8-729-309-06	GE-220*	TCG90	SK3931/90	ECG90	TM194*	WEP64/194*
	2SC2785K	8-729-178-54	GE-89+	TCG85	SK9229/85	ECG85	TM289	WEP910/289
Q603 Q604	2SC945		GE-212	TCG85	SK3124/289	ECG85	TM289	WEP1945
	2SA1175A	8-729-117-54	GE-82*	TCG159*	SK3114/290	ECG159*	TM159*	WEP62/159*
	2SC2785K	8-729-178-54	GE-89+	TCG85	SK9229/85	ECG85	TM289	WEP910/289
	2SC945		GE-212	TCG85	SK3124/289	ECG85	TM289	WEP1945
	2SC2785	8-729-178-54	GE-89+	TCG85	SK9229/85	ECG85	TM289	WEP910/289
Q605 Q650	2SA1175H	8-729-117-54	GE-82*	TCG159*	SK3114/290	ECG159*	TM159*	WEP62/159*
	2SC2785K	8-729-178-54	GE-89+	TCG85	SK9229/85	ECG85	TM289	WEP910/289
	2SC945		GE-212	TCG85	SK3124/289	ECG85	TM289	WEP1945
	2SC2785K	8-729-178-54	GE-89+	TCG85	SK9229/85	ECG85	TM289	WEP910/289
	2SC945		GE-212	TCG85	SK3124/289	ECG85	TM289	WEP1945
Q651	2SA1175H	8-729-117-54	GE-82*	TCG159*	SK3114/290	ECG159*	TM159*	WEP62/159*
	2SC2785K	8-729-178-54	GE-89+	TCG85	SK9229/85	ECG85	TM289	WEP910/289
	2SC945		GE-212	TCG85	SK3124/289	ECG85	TM289	WEP1945
	2SC2785K	8-729-178-54	GE-89+	TCG85	SK9229/85	ECG85	TM289	WEP910/289
	2SC945		GE-212	TCG85	SK3124/289	ECG85	TM289	WEP1945
Q652 Q701 Q703	2SA1175H	8-729-117-54	GE-82*	TCG159*	SK3114/290	ECG159*	TM159*	WEP62/159*
	2SC2785K	8-729-178-54	GE-89+	TCG85	SK9229/85	ECG85	TM289	WEP910/289
	2SC945		GE-212	TCG85	SK3124/289	ECG85	TM289	WEP1945
	2SC2785K	8-729-178-54	GE-89+	TCG85	SK9229/85	ECG85	TM289	WEP910/289
	2SC945		GE-212	TCG85	SK3124/289	ECG85	TM289	WEP1945
Q704 Thru Q706	2SA1175H	8-729-117-54	GE-82*	TCG159*	SK3114/290	ECG159*	TM159*	WEP62/159*
	2SC2785K	8-729-178-54	GE-89+	TCG85	SK9229/85	ECG85	TM289	WEP910/289
	2SC945		GE-212	TCG85	SK3124/289	ECG85	TM289	WEP1945
	2SC2785K	8-729-178-54	GE-89+	TCG85	SK9229/85	ECG85	TM289	WEP910/289
	2SC945		GE-212	TCG85	SK3124/289	ECG85	TM289	WEP1945
Q707	2SC2611	8-729-326-10	GE-232	TCG157	SK3747/157	ECG157	TM287	WEP61/157
	2SC2610BK		GE-222*	TCG399	SK3244	ECG399	TM287*	WEP68/287*
	2SC2611		GE-232	TCG157	SK3747/157	ECG157	TM287	WEP61/157
	2SC2610BK	8-729-326-10	GE-222*	TCG399	SK3244	ECG399	TM287*	WEP68/287*
	2SC1363		GE-20*	TCG289A	SK3124/289	ECG85	TM123AP*	WEP633
Q708 Q709	2SC945		GE-212	TCG85	SK3124/289	ECG85	TM289	WEP1945
	2SC2785	8-729-178-54	GE-89+	TCG85	SK9229/85	ECG85	TM289	WEP910/289

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)
Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

SEMICONDUCTORS (Select replacement transistor for best results) (cont)

REPLACEMENT DATA								
ITEM No.	TYPE No.	MFGR. PART No.	GENERAL ELECTRIC PART No.	TCG PART No.	RCA PART No.	ECG PART No.	THORDARSON PART No.	WORKMAN PART No.
Q801 Q5001	2SA1175H	8-729-117-54	GE-82*	TCG159*	SK3114/290	ECG159*	TM159*	WEP62/159*
	2SA733		GE-48	TCG290A	SK3114/290	ECG290A	TM290	WEP62/159*
	2SC2458BL	8-729-178-54	GE-89+	TCG85	SK3124/289	ECG85	TM289	WEP910/289
	2SC2785		GE-89+	TCG85	SK9229/85	ECG85	TM289	WEP910/289
	2SC1364		GE-210	TCG289A	SK3124/289	ECG85	TM123AP*	WEP634
Q6001 Thru Q6006	2SC945R	8-729-178-54	GE-212	TCG85	SK3124/289	ECG85	TM289	WEP1945
	2SC2785		GE-89+	TCG85	SK9229/85	ECG85	TM289	WEP910/289
Q6007 Q6008 Thru Q6010 Q6011	2SA1175F	8-729-117-54	GE-82*	TCG159*	SK3114/290	ECG159*	TM159*	WEP62/159*
	2SC945R	8-729-178-54	GE-212	TCG85	SK3124/289	ECG85	TM289	WEP1945
	2SC2785		GE-89+	TCG85	SK9229/85	ECG85	TM289	WEP910/289
	2SA1175E	8-729-117-54	GE-82*	TCG85	SK3114/290	ECG85	TM289	WEP62/159*
	2SC2785		GE-89+	TCG85	SK9229/85	ECG85	TM289	WEP910/289
Q6012 Q6013 Q6014 Thru Q6017	2SC945R	8-729-178-54	GE-212	TCG85	SK3124/289	ECG85	TM289	WEP1945
	2SC2785		GE-89+	TCG85	SK9229/85	ECG85	TM289	WEP910/289
	2SA1175E	8-729-117-54	GE-82*	TCG85	SK3114/290	ECG85	TM289	WEP62/159*
	2SC945R	8-729-178-54	GE-212	TCG85	SK3124/289	ECG85	TM289	WEP1945
	2SC2785		GE-89+	TCG85	SK9229/85	ECG85	TM289	WEP910/289
Q6018 And Q6019 Q6020 Q6201	2SC945R	8-729-178-54	GE-212	TCG85	SK3124/289	ECG85	TM289	WEP1945
	2SC1364		GE-210	TCG289A	SK3124/289	ECG85	TM123AP*	WEP634
	2SC2785	8-729-178-54	GE-89+	TCG85	SK9229/85	ECG85	TM289	WEP910/289
	2SA1175H	8-729-117-54	GE-82*	TCG159*	SK3114/290	ECG159*	TM159*	WEP62/159*
	2SC945R	8-729-178-54	GE-212	TCG85	SK3124/289	ECG85	TM289	WEP1945

For SAFETY use only equivalent replacement part.
* Lead configuration may vary from original.
+ Rotate 180° to conform with original lead configuration.

Replacement parts shown may be superseded by the availability of newly introduced replacements.
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CAPACITORS

ITEM No.	RATING	MFG. PART No.	REPLACEMENT DATA		
			SPRAGUE PART No.		
			Q-LINE	GENERAL LINE	
C5046	.001 50V 10%	1-102-858-00 1-102-858-00 			

For SAFETY use only equivalent replacement part.
(1) Part of CRT Socket, Part No. 1-526-629-00.

CONTROLS (All wattages 1/2 watt, or less, unless listed)

ITEM No.	FUNCTION	RESISTANCE	MFG. PART No.	REPLACEMENT DATA	NOTES
				TRW PART No.	
RV201	RF AGC - VHF	4700	1-224-644-XX	U260R502B	
RV202	RF AGC - UHF	4700	1-224-644-XX	U260R502B	
RV301	Sub Contrast	4700	1-224-644-XX	U260R502B	
RV302	Sub Brightness	10K	1-224-645-XX	U260R103B	
RV303	ACC	10K	1-224-645-XX	U260R103B	
RV304	Tint (Hue) Centering	10K	1-224-645-XX	U260R103B	
RV501	Horiz Frequency	5000	1-228-160-11	U260R502B	
RV502	Vert Height (Size)	470	1-224-641-XX	U260R501B	
RV503	Pin Amp	2200	1-224-643-XX	U260R252B	
RV504	Pin Phase	4700	1-222-518-31	U260R502B	
RV701	Screen	1M	1-226-157-00	U260R105B	
RV702	Green Drive	220	1-226-105-00	X201R251B(3)	
RV703	Blue Drive	220	1-226-105-00	X201R251B(3)	
RV704	Red Background	4700	1-224-644-XX	U260R502B	
RV705	Green Background	4700	1-224-644-XX	U260R502B	
RV706	Blue Background	4700	1-224-644-XX	U260R502B	
RV900	Focus		1-228-170-11(5)		
			1-228-170-00		
RV901	Horiz Stat		1-228-171-11(5)		
			1-228-171-00		
RV3301	Vert Hold	10K	1-224-570-31		
RV3302	Sharpness	10K	4-570-31(5)		
		Detent @ 50%	1-226-498-31		
			6-498-11(5)		
RV3303	Bass	10K	1-226-498-00		
		Detent @ 50%	6-498-11(5)		
RV3304	Treble	10K	1-226-498-00		
		Detent @ 50%	6-498-11(5)		
RV3305	Balance	10K	1-226-498-00		
		Detent @ 50%	6-498-11(5)		
RV6001	Phase Adjust	330	1-224-640-XX	U201R501B	
RV6201	Video Level	500	1-228-255-00		

Replacement parts shown may be superseded by the availability of newly introduced replacements.
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CONTROLS (All wattages 1/2 watt, or less, unless listed) (cont)

ITEM No.	FUNCTION	RESISTANCE	MFG. PART No.	REPLACEMENT DATA	NOTES
				TRW PART No.	
RV6202A	Audio Level (Left)	20K	1-228-254-00		
B	Audio Level (Right)	20K			
	Audio Level	50K			
	Audio Level	50K			

For SAFETY use only equivalent replacement part.
(3) For horizontal mounting, bend the two outside terminals to fit P.C. board.
Use jumper to connect center terminal to P.C. board.
(5) Number on unit.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			NOTES
		MFG. PART No.	SPRAGUE/ Q-LINE PART No.	WORKMAN PART No.	
R218	1000 1% 1/4W Carbon Film	1-214-729-00			22-4050
R219	24K 1% 1/4W Carbon Film	1-246-506-00			
R220	24K 1% 1/4W Carbon Film	1-246-506-00			
R228	470 1% 1/4W Carbon Film	1-219-721-00			
R250	12 5% 2W Non-Flammable Metal Oxide	1-206-465-00			
R501	5600 5% 3W Non-Flammable Metal Oxide	1-206-743-00			
R510	56K 1% 1/4W Carbon Film	1-214-771-00			
R517	5100 1% 1/4W Carbon Film	1-214-746-00			
R519	100K 1% 1/4W Carbon Film	1-214-777-00			
R533	15K 5% 2W Non-Flammable Metal Oxide	1-206-692-00			
R534	2000 5% 2W Non-Flammable Metal Oxide	1-206-671-00			
R535	1800 5% 1/8W Non-Flammable Carbon Film	1-246-995-00	QUP-1208		
R536	10K 1% 1/4W Carbon Film	1-214-753-00			
R537	6800 1% 1/4W Carbon Film	1-214-749-00			
R538	10K 1% 1/4W Carbon Film	1-214-753-00			
R540	100K 1% 1/2W Carbon Film	1-214-913-00			22-3102 22-3072 22-1082 22-1088 22-4082 22-4082 22-1086 22-3072 22-1158 22-4096 22-1096 22-2154 22-2154 22-1140 22-1142 22-1066 22-1036 22-4128 22-1072 22-2176
R541	1800 5% 1W Non-Flammable Metal Oxide	1-213-146-00			
R548	100 5% 1W Non-Flammable Metal Oxide	1-213-131-00			
R550	270 5% 1/8W Non-Flammable Carbon Film	1-211-437-00	QUP-1168		
R551	470 5% 1/8W Non-Flammable Carbon Film	1-246-993-00	QUP-1180		
R552	150 5% 3W Non-Flammable Metal Oxide	1-206-705-00			
R553	270 5% 2W Non-Flammable Metal Oxide	1-206-650-00			
R554	270 5% 2W Non-Flammable Metal Oxide	1-206-650-00			
R555	390 5% 1/4W Non-Flammable Carbon Film	1-211-536-00	QUP-1176		
R556	1.2 5% 1/8W Non-Flammable Carbon Film	1-246-979-00	QUP-2005		
R557	1.2 5% 1W Non-Flammable Metal Oxide	1-212-361-00			
R561	100 5% 1W Non-Flammable Metal Oxide	1-213-131-00			
R568	120K 1% 1/4W Carbon Film	1-214-779-00			
R570	.22 5% 1W Non-Flammable Metal Oxide	1-212-352-00			
R571	2.7 5% 1W Non-Flammable Metal Oxide	1-212-365-00			
R572	390K 5% 1/4W Carbon Film		RA-3945		
R576	1000 5% 2W Non-Flammable Metal Oxide	1-206-664-00			
R578	3000 1% 1/4W Carbon Film	1-214-740-00			
R585	1000 5% 1/4W Non-Flammable Carbon Film	1-247-012-00	QUP-1196		
R590	150K 1% 1/4W Carbon Film	1-214-781-00			
R601	1.8 10% 15W WW Non-Flammable	1-205-669-00			
R602	270K 5% 1/2W Carbon Film	1-244-931-00	RB-2745		
R603	270K 5% 1/2W Carbon Film	1-244-931-00	RB-2745		
R604	7500 5% 10W WW	1-205-667-00	247E7525		
R606	68K 5% 1/4W Carbon Film	1-246-517-00	RA-6835		
R607	82K 5% 1/4W Carbon Film	1-246-519-00	RA-8235		
R615	56 5% 1/8W Non-Flammable Carbon Film	1-246-988-00	QUP-1136		
R616	3.3 5% 1/8W Non-Flammable Carbon Film	1-246-980-00	QUP-1030		
R617	.18 5% 3W WW Non-flammable	1-217-613-00			
R618	.18 5% 3W WW Non-flammable	1-217-613-00			
R621	22K 5% 2W Non-flammable Metal Oxide	1-206-696-00			
R623	1.2 5% 1/8W Non-flammable Carbon Film	1-246-979-00	QUP-2005		
R624	100 5% 1/4W Non-flammable Carbon Film	1-247-005-00	QUP-1148		
R625	2.2M 5% 1/2W Carbon	1-202-723-00	RB-2255		
R626	1 5% 2W Non-flammable Metal Oxide	1-206-439-00			
R627	1 5 2W Non-flammable Metal Oxide	1-206-439-00			
R630	1.2 5% 1/8W Non-flammable Carbon Film	1-246-979-00	QUP-2005		

SONY MODEL
KV-2648R (CH:SCC-338E-A)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

MISCELLANEOUS

ITEM No.	PART NAME	MFGR. PART No.	NOTES
CF201	Trap	1-409-332-00	Ceramic (4.5MHz)
CF202	Filter	1-527-260-00	Ceramic (4.5MHz)
CF6001	Trap	1-409-332-00	Ceramic (4.5MHz)
J201	Socket	1-526-575-00	IF
L899	Coil	1-452-183-00	ETC Assembly
# L901	Coil	1-426-008-21	Degaussing
# L902	Coil	1-426-008-21	Degaussing
# M1	Switch	1-553-774-00	Antenna
NL701	Tube	1-519-013-13	Discharge
NL702	Tube	1-519-013-13	Discharge
NL705	Lamp	1-519-108-XX	Neon
# P900	Cord	1-551-454-21	AC Power
# RL601	Realy	1-515-357-00	
# S901	Switch	1-552-658-00	Master On/Off
S6201	Switch	1-516-473-XX	Filter
S6202	Switch	1-516-473-XX	Stereo/Mono
SF201	Filter	1-404-227-41	Surface Acoustical Wave
SG501	Spark Gap	1-519-063-XX	
SG701	Spark Gap	1-519-063-XX	
SG702	Spark Gap	1-519-063-XX	
SG703	Spark Gap	1-519-063-XX	
# V901	CRT	710AB22	
X301	Crystal	1-527-722-00	3.58MHz Osc
	Antenna		UHF, RUSSELL Replacement LIN-2H(1)
			UHF, RUSSELL Replacement BOW-1H(2)
			VHF, RUSSELL Replacement BEA-1H
	Antenna Board	1-536-674-00	Antenna Terminal
	Holder	1-517-072-00	Lamp
	Magnet	1-452-146-00	BMC
	Magnet	1-452-032-00	Convergence, Disk 10mm
	Magnet	1-452-094-00	Convergence, Rotatable Disk 15mm
	P.C. Board	A-1330-293-A	"C" Complete (3)
	P.C. Board	1-604-506-00	"S" (3)
	P.C. Board	1-604-802-00	"UA" (3)
	P.C. Board	1-604-475-00	"U" (3)
	P.C. Board	1-604-476-00	"H" (3)
	P.C. Board	1-604-477-00	"MJ" (3)
	P.C. Board	1-604-478-00	"MK" (3)
	P.C. Board	1-604-480-00	"TA" (3)
	P.C. Board	1-604-976-00	"N" (3)
	P.C. Board	1-604-479-00	"SA" (3)
	P.C. Board	A-1306-127-A	"MH" Complete (3)
	P.C. Board	A-1295-479-A	"A" Complete (3)
	P.C. Board	1-605-005-00	"AV" (3)
	P.C. Board	A-1394-012-A	"AX" Complete (3)
	P.C. Board	A-1385-009-A	"X" Complete (3)
	P.C. Board	A-1306-126-A	"MZ" Complete (3)
	P.C. Board	A-1245-136-A	"F" Complete (3)
	P.C. Board	1-604-801-00	"F1" (3)
#	Permalloy Assembly	X-4308-815-0	Convergence
#	Prescaler	1-463-316-00	BT-981
	UHF/VHF Tuner	1-463-344-00	PTS. Part No. 1-463-344-00
		(BT-858)	(BT-858)

For SAFETY use only equivalent replacement part.
(1) Mounts directly to UHF terminals.
(2) Clips to VHF rod.
(3) Not stocked, since they are seldom required for routine service.

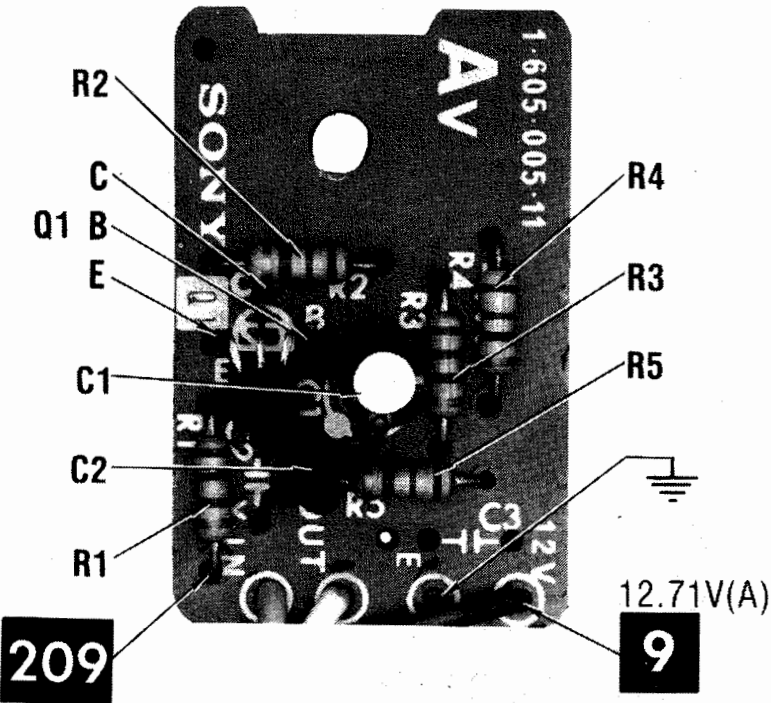
Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

ITEM	PART No.	ITEM	PART No.
Bezel Assembly	X-4342-901-0	Button-Volume (Up)	X-4352-006-0
Emblem-Sony	3-701-912-00	Button-Picture (Up)	X-4352-003-0
Grille Assembly-Speaker	X-4352-009-0	Button-Channel (Down)	X-4352-004-0
Caster-Swivel	4-334-955-00	Button-Volume (Down)	X-4352-004-0
Cabinet Assembly	X-4352-012-0	Button-Picture (Down)	X-4352-004-0
Glass Top	4-352-033-00	Button-Reset	X-4352-002-0
Back Cover	4-352-002-00	Button-Master Power	4-339-528-11
CRT Neck Cover	4-334-942-00	Spring-Buttons (8 used)	3-641-276-00
Frosted Panel	4-352-024-00	Button-Add, Erase, Hue,	4-352-009-00
Door, Assembly-Control	X-4352-011-0	Color, Brightness, Tone,	
Button-Power	X-4352-001-0	Ant/Aux, Matrix Sound	
Button-Channel (Up)	X-4352-005-0	(11 used)	

WIRING DATA

High voltage Lead	Use BELDEN No. 8866 (40KV)
Shielded Hook-up Wire	Use BELDEN No. 8401 or 8421 (Single-Conductor)
	8208 (Two-Conductor)
General-use Unshielded Hook-up Wire	Use BELDEN No. 8528 (Solid) Available in 13 Colors
	8522 (Stranded) Available in 13 Colors
300-Ohm Tuner Input Lead	Use BELDEN No. 8225
75-Ohm Tuner Input Lead	Use BELDEN No. 8241
300-Ohm Antenna Lead-in	Use BELDEN No. 8275 (Foam Core) or 8285 (Foam Jacketed)
Antenna Rotor Cable	Use BELDEN No. 8464 (Flat) or 8484 (Round) 4-Conductor
	8485 (Round) 5-Conductor
	8488 (Round) 8-Conductor



SONY MODEL
KV-2648R (CH.SCC-338E-A)

AV BOARD A Howard W. Sams CIRCUITRACE® Photo

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

Replacement parts shown may be superseded by the availability of newly introduced replacements.
Have your local distributor check Sams COUNTER FACTS for the most up-to-date replacement.

CAPACITORS

ITEM No.	RATING	MFG. PART No.	REPLACEMENT DATA	
			SPRAGUE PART No.	
			Q-LINE	GENERAL LINE
C2	47 50V 5%	1-102-129-00		10TCC-Q47
C201	.0022 50V 10%			10TS-D22
C202	.018 100V 10%			1PB-S18
C205	68 NPO 50V 5%			10TCC-Q68
C207	.01 50V 10%			
C208	10 50V 5%			10TCC-Q10
C209	39 NPO 50V 5%			10TCC-Q39
C210	.0022 50V 10%		QCP-6169-01	10TS-D22
C211	.015 100V 10%			1FT-S15
C213	.0022 50V 10%			10TS-D22
C215	.0022 50V 10%			10TS-D22
C219	.0022 50V 10%			10TS-D22
C220	.0022 50V 10%			10TS-D22
C223	.01 50V		QCP-5194-01	TG-S10
C303	120 50V 5%			10TCC-T12
C304	180 50V 5%			10TCC-T18
C307	.027 100V 10%			1FT-S27
C308	330 50V 10%			10TS-T33
C309	22 50V 5%	1-102-865-00		10TCC-Q22
C311	39 50V 5%			10TCC-Q39
C313	.0033 100V 10%			192P3329R8
C317	.001 50V 10%			10TS-D10
C324	8pF NPO 50V ±.5			
C405	.1 100V 10%		QCP-6138-01	1PB-P10
C411	.027 100V 10%			1FT-S27
C413	.1 100V 10%		QCP-6138-01	1PB-P10
C414	47 50V 5%			10TCC-Q47
C502	.0047 100V 10%		QCP-6132-01	1FT-D47
C503	.0033 100V 10%			1FT-D33
C504	.0022 50V 5%			MWC-222
C510	.12 100V 10%			1PB-P12
C513	.15 200V 10%			2PB-P15
C514	.015 100V 10%		QCP-6169-01	1FT-S15
C515	.015 100V 10%		QCP-6169-01	1FT-S15
C518	.047 100V 10%		QCP-6211-01	1FT-S47
C519	.0022 100V 10%		QCP-6120-01	6PS-D22
C522	.033 100V 10%		QCP-6193-01	1FT-S33
C523	220 500V 10%	1-130-692-00		10TCC-T22
C524	.047 100V 10%		QCP-6211-01	1FT-S47
C527	.1 200V 10%			2PB-P10
C528	220 500V 10%			10TCC-T22
C529	560 500V 10%			10TS-T56
C530	.014 1400V 3%			
C531	.0047 1600V			16PS-D47
C532	.068 200V 10%		QCP-6232-01	6PS-S68
C539	.022 100V 10%		QCP-6181-01	1FT-S22
C540	.43 400V 5%	1-130-239-00		
C541	820 500V 10%			10TS-T82
C545	.001 500V			10TS-D10
C546	.001 500V			10TS-D10
C547	330 500V 10%			10TS-T33
C548	.0022 50V 10%			10TS-D22
C549	.0068 100V 10%		QCP-6148-01	1FT-D68
C550	.056 100V 10%		QCP-6226-01	1FT-S56
C554	50 500V 10%			10TCC-Q50
C555	.015 100V 10%		QCP-6169-01	1FT-S15
C556	15 500V 5%			10TCC-Q15
C563	100 500V 5%			10TCC-T10
C566	330 1500V 15%	1-102-327-00		
C568	330 50V 10%			10TS-T33
C569	330 50V 10%			10TS-T33
C604	.22 125V AC	1-108-745-00		
C602	.22 125V AC	1-108-745-00		
C603	.0047 125V AC	1-161-748-00		125L-D47
C604	.0047 125V AC	1-161-748-00		125L-D47

Replacement parts shown may be superseded by the availability of newly introduced replacements.
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CAPACITORS (cont)

ITEM No.	RATING	MFG. PART No.	REPLACEMENT DATA	
			SPRAGUE PART No.	
			Q-LINE	GENERAL LINE
C607	330 500V 10%	1-130-697-00 1-130-073-00 1-161-748-00		10TS-T33
C608	.022 100V 10%		QCP-6181-01	1FT-S22
C609	.039 100V 10%		QCP-6202-01	1FT-S39
C611	.001 50V 10%			10TS-D10
C612	470 50V 10%			10TS-T47
C613	.025 1400V 3%			
C614	.16 400V 5%			125L-D47
C615	.0047 125V AC		QCP-6181-01	1FT-S22
C618	.022 100V 10%			10PS-D47
C619	.0047 630V 10%			2PB-S10
C620	.024 600V 3%			2PB-S10
C621	.0047 630V 10%			10TCC-T10
C626	.01 200V 10%	1-130-696-00		125L-D47
C627	.01 200V 10%			10TS-T33
C628	100 500V 5%			10TS-D10
C629	.0047 125V AC			10TS-D10
C630	330 50V 10%			10TS-D10
C631	.001 500V			10TS-D10
C632	.001 500V			10TS-D10
C650	.0047 500V		QCP-5180-01	5GA-D47
C651	.0047 500V		QCP-5180-01	5GA-D47
C653	.01 100V 10%		QCP-6160-01	1FT-S10
C654	.0047 50V 10%			10TS-D47
C658	.0022 500V 10%		QCP-6120-01	6PS-D22
C659	.001 50V 10%			10TS-D10
C665	560 500V 10%			10TS-T56
C701	.01 50V	(1) (1)	QCP-5194-01	TG-S10
C703	.047 50V		QCP-5236-01	TG-S50
C705	.01 50V		QCP-5194-01	TG-S10
C706	270 50V 5%			10TCC-T27
C708	.01 50V		QCP-5194-01	TG-S10
C709	22 50V 5%			10TCC-Q22
C710	22 50V 10%			10TCC-Q22
C711	.01 50V		QCP-5194-01	TG-S10
C714	820 500V 10%			10TS-T82
C715	820 500V 10%			10TS-T82
C716	15			
C717	15			
C719	330 2KV			30GA-T33
C720	.022 1KV			10PS-S22
C721	47 50V 5%			10TCC-Q47
C722	47 50V 5%	1-161-748-00		10TCC-Q47
C723	56 50V 5%			10TCC-Q56
C724	.1 200V 10%			2PB-P10
C725	.022 200V 10%		QCP-6184-01	6PS-S22
C726	.001 500V			10TS-D10
C5004	.033 100V 10%		QCP-6193-01	1FT-S33
C5005	.033 100V 10%		QCP-6193-01	1FT-S33
C5006	.033 100V 10%		QCP-6193-01	1FT-S33
C5007	.001 100V 10%		QCP-6104-01	1FT-D10
C5016	.033 100V 10%		QCP-6193-01	1FT-S33
C5017	.001 100V 10%		QCP-6104-01	1FT-D10
C5024	.015 100V 10%		QCP-6169-01	1FT-S15
C5026	.0018 100V 10%			1PB-D18
C5031	100 50V 5%	1-102-327-00		10TCC-T10
C5033	.027 100V 10%			1FT-S27
C5034	.1 100V 10%		QCP-6138-01	1PB-P10
C5036	100 50V 5%			10TCC-T10
C5037	100 50V 5%			10TCC-T10
C5039	.027 100V 10%			1FT-S27
C5040	.1 100V 10%		QCP-6138-01	1PB-P10
C5042	100 50V 5%			10TCC-T10
C5045	.047 100V 10%		QCP-6211-01	1FT-S47

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RESISTORS (Power and Special) (cont)

ITEM No.	RATING	REPLACEMENT DATA		
		MFGR. PART No.	SPRAGUE/ Q-LINE PART No.	WORKMAN PART No.
R650	1.2 5% 1/8W Non-flammable Carbon Film	1-246-979-00	QUP-2005	
R651	47 5% 2W Non-flammable Metal Oxide	1-206-479-00		22-4064
R652	10 5% 1W Non-flammable Metal Oxide	1-212-372-00		22-3046
R655	68K 1% 1/2W Carbon Film	1-214-909-00		
R656	6200 1% 1/4W Carbon Film	1-214-748-00		
R717	5600 5% 2W Non-flammable Metal Oxide	1-206-682-00		22-4114
R724	5600 5% 2W Non-flammable Metal Oxide	1-206-682-00		22-4114
R728	3900 5% 2W Non-flammable Metal Oxide	1-206-678-00		22-4110
R729	3900 5% 2W Non-flammable Metal Oxide	1-206-678-00		22-4110
R735	3300 5% 1W Non-flammable Metal Oxide	1-213-149-00		22-3108
R736	12K 5% 2W Non-flammable Metal Oxide	1-206-690-00		22-4122
R740	3300 5% 1W Non-flammable Metal Oxide	1-213-149-00		22-3108
R741	12K 5% 2W Non-flammable Metal Oxide	1-206-690-00		22-4122
R754	3300 5% 1W Non-flammable Metal Oxide	1-213-149-00		22-3108
R755	12K 5% 2W Non-flammable Metal Oxide	1-206-690-00		22-4122
R801	120 5% 2W Non-flammable Metal Oxide	1-206-642-00	QUP-1040 QUP-1168	22-4074
R802	100 5% 1W Non-flammable Metal Oxide	1-213-131-00		22-3072
R5023	4.7 5% 1/8W Non-flammable Carbon Film	1-246-981-00		22-1040
R6025	270 5% 1/8W Non-flammable Carbon Film	1-211-437-00		22-1082
TH201	PTC 1500 Cold	1-800-626-00		
TH801	NTC 4500 Cold	1-800-627-00		FR 1030
TH901	NTC 4550 Cold	(1)		
THP601	PTC 8.4 Cold	1-806-214-00		
	NTC 156 Cold			

For SAFETY use only equivalent replacement part.
(1) Part of Deflection Yoke L905 Part No. 1-451-201-00.

COILS (RF-IF)

ITEM No.	FUNCTION	MFGR. PART No.	ITEM No.	FUNCTION	MFGR. PART No.
DL301	Delay Line	1-415-176-00	L707	Peaking (82uH)	1-407-704-00
DL6001	Delay Line (1H)	1-415-207-00	L708	RF Choke (180uH)	1-407-708-00
L201	RF Choke (3.3uH)	1-407-687-00	L709	RF Choke (54uH)	1-459-257-00
L202	Sound IF (18uH)	1-407-696-00	L710	RF Choke (150uH)	1-407-171-XX
L203	Sound IF (3.3uH)	1-407-687-00	L6001	Peaking (22uH)	1-407-697-00
L204	RF Choke (8.2uH)	1-407-189-XX	L6002	Peaking (12uH)	1-407-694-00
L301	Peaking (33uH)	1-407-699-00	L6003	RF Choke (22uH)	1-407-697-00
L302	RF Choke (5.6mH)	1-408-163-00	L6004	RF Choke (10uH)	1-407-693-00
L303	RF Choke (1.2uH)	1-407-682-00	L6005	RF Choke (47uH)	1-407-701-00
L304	RF Choke (1.2uH)	1-407-682-00	L6006	Peaking (15uH)	1-407-695-00
L401	Peaking (33mH)	1-408-247-00	L6007	Trap (18uH)	1-407-696-00
L501	RF Choke (82uH)	1-408-226-00	L6008	Peaking (18uH)	1-407-696-00
L502	RF Choke (45uH)	1-459-155-00	L6009	RF Choke (15uH)	1-407-695-00
L503	RF Choke (10uH)	1-407-693-00	L6301	Peaking (3.3uH)	1-407-364-00
L504	RF Choke (.74uH)	1-407-365-00	L6302	Peaking (3.3uH)	1-407-364-00
L505	RF Choke	1-459-075-00	T201	Video IF	1-404-321-00
L506	Horiz Linearity (3.3mH)	1-459-256-00	T202	Video IF	1-404-181-00
			T203	AFT	1-404-182-00
L508	RF Choke (1.5mH)	1-405-494-00	T204	Sound IF	1-403-367-00
L601	RF Choke (22uH)	1-407-697-00	T205	Video IF	1-404-318-00
L602	RF Choke (.7uH)	1-407-365-00	T206	Video IF	1-404-153-00
L701	Peaking (330uH)	1-407-175-XX	T302	Chroma	1-425-995-00
L702	Peaking (330uH)	1-407-175-XX	T601	Line Choke	1-421-357-00
L703	Peaking (5.6uH)	1-407-690-00	T606	Converter Drive	1-405-760-00
L704	RF Choke (10mH)	1-407-504-00	T6001	Comb Filter (22mH)	1-407-571-00
L705	Peaking (82uH)	1-407-704-00	T6002	3.58MHz Trap	1-409-193-00
L706	Peaking (82uH)	1-407-704-00			

For SAFETY use only equivalent replacement part.

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COILS & TRANSFORMERS (Sweep Circuits)

ITEM No.	FUNCTION	REPLACEMENT DATA		
		MFGR. PART No.	ON UNIT	THORDARSON PART No.
# DY1	Yoke Horiz 1.1mH 100° Vert 23.9mH	1-451-201-00	1-451-201-11	
# L507	Width	1-459-240-00	240-11	
# L906	Neck Assembly	1-452-182-00		
# T501	Horiz Driver	1-437-079-00	437-079	
# T502	Horiz Output	1-439-273-00	1-439-273-11	
# T503	Pincushion	1-421-445-00	1-421-445-11	
# T602	Main Power	1-421-452-00	1-421-452-11	
# T603	Choke	1-421-453-00	1-421-453-11	
# T604	Conv Driver	1-437-078-00	437-078	
# T605	RLT	1-421-454-00	1-421-454-11	

For SAFETY use only equivalent replacement part.

TRANSFORMER (Power)

ITEM No.	RATING			REPLACEMENT DATA		
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	THORDARSON PART No.	NOTES
# T901	120V AC 39mA AC 129	14.24V AC 220mA AC 5.18		1-446-972-00		On unit Part # 1-446-972-1

For SAFETY use only equivalent replacement part.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP901	7" PM 8 Ohm	1-503-030-00		
SP902	2" PM 8 Ohm	1-503-030-11(1)		
		1-503-031-00		
SP903	7" PM 8 Ohm	1-503-031-11(1)		
		1-503-030-00		
SP904	2" PM 8 Ohm	1-503-030-11(1)		
		1-503-031-00		
		1-503-031-11(1)		

(1) Number on unit.

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA			
		MFGR. PART No.		BUSS PART No.	
		DEVICE	HOLDER	DEVICE	HOLDER
# F601	5A @ 125V Slow-Blow	1-532-272-XX		MDX 5	1A1907-02

For SAFETY use only equivalent replacement part.